Thin Solid Films, *165* (1988) 371–380

Cumulative Author Index for Volumes 155–165

The volume numbers are given in bold-face type preceding the page numbers.

A

Abdellaoui, A., **164**, 333
Abe, O., **162**, 7
Abhyankar, N. M., **161**, 77; **164**, 345
Abraham, P. K., **164**, 353
Abul-Fadl, A., **163**, 427
Acharya, B. S., **164**, 75
Acharya, P. K. **164**, 233
Adachi, H., **163**, 175
Adachi, Y., **157**, 117
Adamiec, K., **161**, 157
Agarwal, R. P., **158**, 1
Agarwal, S. K., **158**, L45
Agarwal, V. K., **164**, 195
Agarwala, R. P., **164**, 135; **165**, 163, L107
Agashe, C., **164**, 261
Agius, B., **161**, 35
Agnihotri, O. P., **164**, 309
Agnihotry, S. A., **164**, 327
Ahmed, H., **163**, 337
Aiyer, C. R., **163**, 229
Aizawa, M., **160**, 477
Akasaki, I., **163**, 415
Akhter, M. A., **158**, 271
Al-Sabbagh, S. K., **164**, 221
Albu-Yaron, A., **162**, 183
Aleksandrov, L. N., **157**, 337
Alexieva, C., **157**, 43
Allen, R. A., **155**, 343
Allen, S., **160**, 217
Alnot, P., **158**, 81
Als-Nielsen, J., **159**, 17, 29, 379
Alterovitz, S. A., **157**, 97
Alvi, N. S., **161**, 131
Amano, H., **163**, 415
Ameziane, A., **157**, 291
Anand, S., **163**, 443
Anderson, B. L., **160**, 379
Ando, E., **160**, 279
Ando, M., **160**, 67
Angus Macleod, H., **159**, L57
Annamalai, N. K., **155**, 97
Aoki, H., **157**, 105
Aoki, K., **160**, 317
Aoyagi, Y., **163**, 405
Arai, T., **165**, 139
Araki, H., **158**, 207
Arata, Y., **156**, 315
Arbaoui, M., **164**, 405
Arndt, T., **159**, 221, 443
Arnold, S. M., **165**, 1
Arora, B. M., **163**, 421, 443
Arya, S. P. S., **157**, 169, 267
Ashok, S., **163**, 323; **164**, 187
Athwal, I. S., **162**, 1
Atkinson, R., **162**, 89
Augelli, V., **158**, 217
Auvert, G., **155**, 75
Aviram, A., **157**, 21
Avni, R., **156**, 79
Awaji, H., **160**, 21
Azzam, R. M. A., **163**, 33

B

Baba, S., **163**, 67; **164**, 153, 169
Babulanam, S. M., **158**, L49
Bacquet, G., **155**, 175
Badawy, W. A., **158**, 277
Badzian, A., **164**, 187
Badzian, T., **164**, 187
Bai, Y., **159**, 239
Balakrishnan, K. S., **163**, 279
Balasubramanian, K., **164**, 391
Balk, P., **162**, 21
Ball, R. K., **161**, 235
Bandyopadhyay, A. K., **155**, 243
Banerjee, H. D., **164**, 85
Banerjee, R., **164**, 227
Banerjee, S., **164**, 33
Banovec, A., **164**, 129
Baradarajan, A., **164**, 119
Barchewitz, R., **164**, 405
Bardin, T. T., **165**, 243
Bardoz, L., **158**, 265
Barger, W., **159**, 369
Barger, W. R., **155**, 1
Baribeau, J.-M., **163**, 455
Barna, P. B., **158**, 299
Barnard, W. O., **165**, 77
Barraud, A., **156**, L27; **159**, 83, 207, 315; **160**, 53, 81, 107; **161**, L73
Barriere, A. S., **158**, 81
Barton, J. W., **155**, 187
Bartsch, H., **159**, L65
Bartuch, H., **164**, 455
Barua, A. K., **156**, 277; **164**, 217, 227
Basavaiah, S., **164**, 501
Basol, B. M., **165**, 237
Basu, N., **156**, 243
Basu, P. K., **158**, 271
Basu, S., **164**, 13
Batabyal, A. K., **164**, 227
Bates, Jr., C. W., **158**, 133; **159**, L53
Batty, M. J., **163**, 479
Bayo, L., **155**, 125
Beckham, K., **162**, 247
Beddies, G., **158**, 255
Bedeaux, D., **164**, 57
Bedi, R. K., **162**, 1
Bekiarov, D., **157**, 43
Belitsky, V. F., **162**, 365; **165**, 181

© Elsevier Sequoia/Printed in The Netherlands

Belousov, I. I., **157**, 337
Belyaev, A.P., **158**, 25
Beneking, H. **156**, 239
Benferhat, R., **156**, 295
Benhamou, A., **165**, 29
Benmalek, M., **156**, L21
Bennett, J. M., **164**, 5
Bennouna, A., **164**, 69
Berezin, A. A., **158**, L37
Berg, S., **164**, 475
Berggren, K.-F., **164**, 381
Bergignat, E., **162**, 81
Bergkvist, M., **164**, 5
Berkley, D. D., **156**, 271
Bernede, J. C., **157**, 291; **158**, 285
Berning, G. L. P., **158**, 61
Bertault, D., **158**, 81
Berti, M., **165**, 279
Bertrandt-Zytkowiak, M., **161**, 59
Bezuidenhout, D. F., **155**, 17
Bhan, M. K., **163**, 343
Bhat, K. N., **156**, 243
Bhatia, K. L., **163**, 331
Bhatia, S. M., **163**, 317
Bhatnagar, Y. K., **163**, 237
Bhattacharya, D., **164**, 115
Bhide, V. G., **164**, 261
Bhoraskar, S. V., **161**, 187; **162**, 333
Bhuiyan, A. H., **161**, 187; **162**, 333
Bhuiyan, A. S., **161**, 93; **162**, 13
Bibic, N., **163**, 309; **164**, 493
Bijeon, J. L., **155**, L1
Biro, L. P., **165**, 303
Bischoff, M., **165**, 49
Biswas, P. K., **163**, 273
Blinov, L. M., **160**, 271
Blundell, A., **156**, 11
Boag, N. M., **156**, 327
Bobbert, P. A., **164**, 57, 63
Bober, Z., **157**, 13
Boccara, A. C., **155**, 165
Bogdanov, Z., **163**, 309
Bohorquez, M., **159**, 133
Boltushkin, A. V., **158**, 7
Boos, J. B., **162**, 161
Borodi, G., **165**, 303
Bortz, M., **162**, 315
Bose, D. N., **164**, 13
Bose, G., **164**, 429
Bost, M. C., **162**, 29
Bouabellou, A., **155**, 285
Boudet, A., **160**, 373
Bougnot, J., **155**, 125
Bouquet, S., **161**, L69
Bovard, B. G., **159**, L57
Bowler, C. J., **164**, 281
Bradaczek, H., **159**, 451
Brandstatter, M., **160**, 341
Brantervik, K., **165**, 67
Bratu, I., **165**, 303
Braun, H. G., **159**, 301
Bretschneider, W., **158**, 255
Breuer, U., **156**, 239
Broitman, E., **165**, L101
Brown, B., **159**, L53
Brunner, J., **163**, 49
Bryce, M. R., **165**, L97
Bubeck, C., **160**, 1
Bubeck, C., **159**, 221, 443
Bucci, J. V., **163**, 447
Budhani, R. C., **165**, 243
Buhaenko, M R., **159**, 171, 231, 253
Bunshah, R. F., **163**, 131; **165**, 243
Burberry, M., **158**, 175
Burgaud, P., **157**, 291
Burnett, P. J., **157**, 195, 233

C

Cade, N. A., **156**, 39; **160**, 355
Cammenga, H. K., **159**, 53
Campos, J., **161**, 21
Candea, R. M., **165**, 303
Canevari, V., **157**, 175
Carcia, P. F., **155**, 53
Carles, R., **155**, 331
Carlson, J.-O., **158**, 107
Carmi, U., **156**, 79
Carpenter, M. M., **161**, 315
Carr, N., **156**, 39
Cerny, R., **156**, 53; **158**, 225
Chaklanobis, S., **164**, 191
Chakraborty, B. R., **164**, 27
Chakravarty, B. C., **163**, 373
Chakravarty, S., **163**, 421, 443
Chan, T. C., **157**, 223
Chand, A., **164**, 429
Chandra, S., **164**, 327, 429
Chandrasekaran, K. D., **164**, 119
Chandrashekhar, G. V., **163**, 43; **164**, 199
Chandvankar, S. S., **163**, 421
Chang, C. S., **161**, 263
Chao, S. S., **163**, 447
Chao, Y.-K., **162**, 247
Chaouki, A., **158**, 81
Chapman, D., **155**, 255
Chari, K. S., **164**, 309
Chater, R. J., **161**, 333
Chaudhuri, A. K., **164**, 85; **165**, 257
Chauvet, J.-P., **159**, 149
Chen, H., **163**, 55
Chen, K. J., **163**, 55
Chen, L. J., **161**, 263; **162**, 287, 295
Chen, M. S., **158**, 69
Chen, Z., **162**, 305
Chernushich, A. P., **163**, 475
Chevallier, J., **164**, 487
Chiba, R., **157**, 307
Chimczak, E., **161**, 59
Chollet, P. A., **160**, 373
Chopra, K. L., **155**, L15; **161**, 107; **163**, 359; **164**, 51, 115, 233, 265, 449
Chou, T. C., **163**, 43
Chu, J. J., **161**, 263
Chu, M., **163**, 323
Chu, W. K., **163**, 455
Chun, J. S., **155**, 87; **165**, 149
Clarke, K. D., **155**, 17
Cobianu, C., **161**, L71
Cocke, D. L., **155**, 133
Cole, B. E., **165**, 1
Collis, W. J., **163**, 427
Cook, J. G., **163**, 409
Cook, M. J., **159**, 395, 469
Coombs, J. H., **159**, 293
Coronel, P., **160**, 107
Cot, L., **162**, 223
Cotton, T. M., **159**, 141; **160**, 389
Coufal, H. J., **160**, 333
Cross, G. H., **156**, 39; **160**, 355
Curzon, A. E., **164**, 81; **165**, 217

D

D'Amico, A., **157**, 169, 267
d'Heurle, F. M., **161**, 197
Dadarlat, D., **165**, 303
Danesh, P., **161**, 85
Daniel, M. F., **159**, 395, 469
Darabout, A., **165**, 303
Das, B. K., **163**, 373
Das, D., **164**, 227
Das, S. R., **163**, 409
Das-Gupta, D. K., **158**, 93
Dasgupta, D., **155**, 309
Davazoglou, D., **164**, 333, 369

Davidovic-Ristovski, G., **157**, 59
Davies, G., **155**, 187
Davies, G. D., **160**, 483
Davies, G. H., **159**, 461
Davies, S. G., **160**, 231
Dawar, A. L., **161**, L79
De, S. C., **164**, 217
De, S. C., **156**, 277
de Pauli, C. P., **162**, 353
de Ridder, R. M., **162**, 375
De Rugy, H., **161**, L69
Deb, S. K., **163**, 75
Decher, G., **160**, 407
Delhaes, P., **161**, L73
Delichere, P., **161**, 35, 47
Demmin, R. A., **163**, 393
Deshpandey, C., **163**, 131
Deutsch, M., **159**, 29
Devanathan, V., **164**, 141
Devenyi, A., **158**, 299
Dey, T. K., **164**, 115
Dhanasekaran, R., **163**, 383, 437
Dhindsa, A. S., **165**, L97
Dimmich, R., **158**, 13; **163**, 485
Dintner, H., **164**, 455
Djinovic, Z., **161**, 157
Djuric, Z., **161**, 157
Dobrev, D., **161**, 213
Dobrowolski, J. A., **163**, 97
Doi, A., **163**, 405
Donnadieu, A., **164**, 333, 369
Dote, J., **159**, 369
Doughty, K., **158**, 93
Douglas, E. C., **164**, 417
Dowben, P. A., **156**, 327, L31
Dowben, S. L., **156**, 327
Dresselhaus, M. S., **160**, 327
Drevillon, B., **156**, 295; **163**, 157
Du, J. F., **163**, 55
Du, Y. C., **163**, 349
Dua, A. K., **164**, 135; **165**, 163, L107
Dube, D. C., **164**, 249
Duda, G., **159**, 221
Dudek, J. C., **156**, 21
Dumont, M., **160**, 399
Dunn, A. J., **159**, 395
Durand, J., **162**, 223
Durfee, W. S., **159**, 331, 451
Duschl, C., **159**, 323, 379; **160**, 251, 501
Dusek, V., **158**, 265
Dutta, J., **162**, 119
Dutta, P., **159**, 111, 215

E

Earls, J. D., **160**, 355; **161**, 325
Earnshaw, J. C., **159**, 159
Economou, N. A., **163**, 249
Edelmann, J., **165**, 11
Efimov, V. M., **157**, 337
Egan, R. J., **164**. 441
Eicker, U., **164**, 221
Eijkel, K. J. M., **162**, 375
El-Hossary, F. M., **157**, 29
El-Taher, E., **158**, 277
Elliott, S. R., **164**, 467
Ellwanger, R. C., **161**, 289
Endo, T., **163**, 233, 261
Engstrom, I., **161**, 197
Enyo, M., **161**, L91
Erola, M., **156**, 117
Esteve, D., **161**, 93; **162**, 13
Etemad, S., **160**, 373
Evans, N. J., **160**, 177
Evans, S. D., **160**, 99
Ezumi, H., **163**, 233, 261

F

Fabian, D. J., **157**, 29
Falaras, P., **161**, 35, 47
Falcony, C., **165**, 249
Farabaugh, E. N., **157**, 351
Fedorov, A. A., **163**, 497
Fedosyuk, V. M., **158**, 7
Feldman, A., **157**, 351
Felton, L. E., **155**, 209
Ferla, G., **161**, 13
Fernholz, G., **156**, 239
Ferrell, T. L., **155**, L1
Ferrieu, F., **164**, 43
Feurer, E., **157**, 81
Feygenson, A., **157**, 49; **165**, 109
Fischer, A. G., **162**, 263
Fitori, P., **165**, 303
Flevaris, N. K., **163**, 491
Florsheimer, M., **159**, 115
Fortin, E., **161**, 207; **164**, 289
Fournier, D., **155**, 165
Fraisse, R., **165**, 211
Freeman, W. G., **161**, 235
Fremaux, P., **160**, 217
Frey, W., **159**, 379; **160**, 251
Friberg, A. T., **158**, 1
Frohlich, H., **164**, 481
Froment, M., **161**, 35
Fromherz, P., **159**, 405, 421; **160**, 341, 347
Fuchs, G., **165**, 347
Fuchs, H., **159**, 301
Fujihira, M., **160**, 125, 317
Fujita, H., **165**, 139
Fujitsuka, M., **164**, 95
Fujiwara, H., **158**, 239; **163**, 379, 387
Fujiyasu, H., **161**, 149
Fukuda, H., **159**, 345
Fukuda, K., **159**, 337, 353; **160**, 43, 87, 153, 303
Fukumoto, M., **162**, 145
Fukushima, T., **164**, 157
Fukutomi, M., **156**, 287
Funakoshi, N., **157**, 307; **162**, 343
Furuki, M., **159**, 337
Furuno, T., **159**, 479; **160**, 145

G

Gadenne, P., **165**, 29
Gagnaire, A., **162**, 81
Gaillyova, Y., **155**, 217
Gallais, P., **165**, 227
Galtier, M., **155**, 125
Galus, W., **161**, 157
Gamble, R., **162**, 89
Gangal, S. A., **163**, 229
Ganguli, D., **163**, 273
Ganguly, G., **164**, 217
Garcia, M., **165**, 249
Garg, J. C., **164**, 269
Gasgnier, M., **165**, 29
Gee, M. A., **165**, 265
Gelin, B., **164**, 475
Gendry, M., **162**, 223
George, V. C., **164**, 135; **165**, 163, L107
Georgson, M., **157**, 255
Gerasimenko, N. N., **161**, 343
Gershinskii, A. E., **162**, 171
Gevers, G., **158**, 81
Ghatak, A. K., **163**, 461
Ghatak, S. K., **164**, 115
Ghita, C., **161**, 671
Ghorai, A., **155**, 243
Gilmore, C. M., **165**, 359
Gingell, D., **155**, 255
Girling, I. R., **160**, 355
Girling, I. R., **156**, 39; **160**, 209; **161**, 325
Giugni, S., **163**, 479
Gladun, Ch., **164**, 455
Gobel, H. D., **159**, 63
Godet, C., **155**, 227
Gogoi, B., **164**, 115
Goldman, A. M., **156**, 271
Gomez, M., **164**, 243

Gong, M., **159**, 239
Goodwin, J. W., **159**, 171
Goodwin, M. J., **156**, 39
Gordon, P. F., **160**, 217
Gordon, R. G., **158**, 313
Gore, R. B., **164**, 255
Goringe, M. J., **160**, 491
Gorokhov, E. B., **162**, 129
Goto, K. S., **161**, 67
Gou, Y. S., **158**, 69
Goudonnet, J. P., **155**, L1
Gould, R. D., **164**, 281
Govindaraj, G., **164**, 141
Granqvist, C. G., **158**, L49; **164**, 381
Grantscharova, E., **161**, 213
Gray, G. W., **156**, 39
Grec, D., **160**, 373
Greef, R., **164**, 63
Griffin, A. C., **161**, 315
Griffiths, G. J., **163**, 479
Grigorov, G. I., **156**, 265; **161**, 249, L69
Grill, A., **156**, 79
Gronberg, L., **161**, 197
Grubb, S. G., **160**, 363
Grudeva, S. C., **161**, 223
Grudzien, M., **161**, 157
Grundy, M. J., **159**, 43, 253
Gu, P. F., **156**, 153; **162**, 89
Guarnieri, C. R., **157**, 21
Guegan, H., **158**, 81
Guenther, A. H., **163**, 203
Gulyaev, Yu. V., **163**, 475
Guo, L., **158**, L39
Gupta, A. K., **158**, L45
Gupta, D., **164**, 199
Gupta, M., **164**, 309
Gupta, V. L., **161**, L79
Gusten, H., **155**, 295
Gutakovsky, A. K., **163**, 497

H

Haba, B., **158**, 133; **159**, L53
Hadj-Zoubir, N., **156**, L21
Haeri, A., **165**, 359
Hakim, M. O., **158**, L49
Hallmark, V. M., **160**, 311
Halpin, C., **163**, 399
Halverson, D. E., **155**, 133
Hamada, Y., **160**, 287
Hamberg, I., **164**, 381
Hanawa, T., **158**, 207; **164**, 37
Haneman, D., **163**, 167
Hann, R. A., **160**, 217
Hantzpergue, J. J., **165**, 227
Hara, K., **158**, 239; **163**, 387
Hara, T., **157**, 135
Haradome, M., **162**, 7
Harrison, K. J., **159**, 469
Harsta, A., **158**, 107
Hart, R. C. O., **159**, 395
Hashida, T., **160**, 279
Hashimoto, M., **161**, 123
Hashimoto, T., **158**, 239; **163**, 387
Hata, T., **163**, 467
Hatada, M., **159**, 91
Hattori, S., **163**, 229
Hauw, C., **158**, 81
Hayden, L. M., **160**, 379
Heard, D., **160**, 491
Heckl, W. M., **159**, 125
Heinrich, A., **164**, 455
Heinrich, G., **155**, 295
Helm, C., **159**, 379
Helm, C. A., **159**, 17
Hemment, P. L. F, **161**, 333
Hemmes, D. G., **157**, 135
Hess, D. W., **162**, 59
Hibino, J., **160**, 279
Higashigaki, Y., **162**, 273
Higgins, B. G., **159**, 191; **160**, 379, 471
Hiramatsu, K., **163**, 415
Hirao, T., **155**, 325
Hirochi, K., **163**, 175
Hirota, S., **165**, 337
Hirota, Y., **162**, 41, 235
Hitova, L., **161**, 257
Hodge, P., **155**, 343; **160**, 99
Hoffmann, H., **162**, 155
Holcroft, B., **160**, 53, 445, 491
Hollinger, G., **162**, 81, 223
Holloway, P., **162**, 247
Holzhuter, G., **164**, 455
Hon, M. H., **156**, 259
Honda, K., **160**, 67
Hong, K., **160**, 187
Hoorfar, A., **160**, 99
Horita, S., **163**, 467
Horrigan, E. C., **164**, 441
Horsthuis, W. H. G., **162**, 375
Hoshino, M., **160**, 87
Houghton, D. C., **163**, 455
Howarth, V. A., **160**, 483
Howson, R. P., **158**, 141
Hsieh, Y. F., **162**, 287, 295
Hu, H. S.-W., **165**, 317
Huang, K. F., **158**, 69
Huang, S.-L., **162**, 325
Huang, T. C., **157**, 283
Hugot-Le Goff, A., **161**, 35, 47
Humenberger, J., **163**, 241
Hung, L. S., **162**, 199
Huq, S. E., **163**, 337
Hussain, K., **156**, 161
Hwang, H. L., **155**, 317

I

Ibrahim, K., **164**, 221
Ignatowicz, S. A., **157**, 1
Ikegami, A., **160**, 145
Ikegami, K., **159**, 285, 435; **160**, 61, 133, 139
Ilyushenko, L. F., **158**, 7
Imai, Y., **160**, 15
Inoue, M., **158**, 123
Ishida, A., **161**, 149
Ishiguro, T., **159**, 435
Ishihara, S.-I., **155**, 325
Ishihara, T., **159**, 91
Ishikawa, J., **157**, 143
Ishizawa, Y., **157**, 135
Isshiki, T., **162**, 235
Itoh, M., **161**, 123
Itoh, U., **165**, 337
Ivaschchenko, A. V., **160**, 271
Iwai, S., **163**, 405
Iwata, K., **165**, 323
Iyer, S. N., **163**, 427
Iyoda, T., **160**, 67

J

Jackman, T. E., **163**, 455
Jager, H. U., **161**, 333
Jain, A., **163**, 359
Jain, A. K., **164**, 33
Jayaram, B., **158**, L45
Jedju, T., **160**, 373
Jethwa, S. R., **160**, 355
Jiang, G. B., **163**, 349
Jin, Z.-C., **164**, 381
John, P. K., **164**, 481
Johnston, D. S., **155**, 255
Johri, M., **158**, L45
Jones, C. A., **155**, 187; **159**, 461; **160**, 117
Jones, R. J., **160**, 355
Jonker, B. T., **164**, 111
Joseph, J., **162**, 81
Joshi, J. C., **161**, L79
Joshi, R. V., **163**, 267; **164**, 501
Josse, D., **160**, 217
Jovanic, B. R., **157**, 59
Jovic, V., **161**, 157

K

Kaganovich, E. B., **162**, 67
Kahn, O., **160**, 107
Kajanto, I., **158**, 1
Kajiwara, T., **164**, 169
Kajzar, F., **160**, 209, 373
Kakimoto, M.-A., **160**, 15
Kalainathan, S., **163**, 383
Kalbitzer, S., **163**, 331
Kalina, D. W., **160**, 363
Kalinkin, I. P., **158**, 25
Kamada, T., **163**, 175
Kamide, Y., **163**, 467
Kamiya, K., **163**, 467
Kamiya, M., **158**, 239; **163**, 387
Kaneko, F., **160**, 327
Kaneko, T., **160**, 67
Kanev, M. J., **161**, 223
Kang, J. H., **156**, 271
Kanniah, N., **163**, 297
Kanter, Yu. O., **163**, 497
Kapoor, S. K., **161**, L79
Kapur, V. K., **165**, 237
Karakostas, Th., **163**, 491
Karanjai, M. K., **155**, 309
Karekar, R. N., **155**, 31; **161**, 77; **164**, 345
Karlsson, B., **161**, 197
Kashyap, S. C., **163**, 343, **164**, 115
Kasica, H., **155**, L5
Kataria, N. D., **158**, L45
Katayama, I., **164**, 37
Katiyar, R. S., **164**, 243
Katoh, T., **160**, 153
Kaur, J., **162**, 1
Kawabata, Y., **159**, 35; **160**, 33, 61, 133, 139, 299
Kawaguchi, T., **165**, 323
Kawai, H., **157**, 159
Kawai, M., **157**, 189
Kazumata, Y., **157**, 117
Kemper, C., **159**, 405
Kessler, E., **155**, 197
Ketterson, J. B., **159**, 111, 215
Khan, D. C., **164**, 191
Khondker, A. N., **155**, 97
Khorrami, M. N., **163**, 427
Kikuchi, A., **164**, 153
Kilner, J. A., **161**, 333
Kim, D. W., **165**, 149
Kim, H.-G., **165**, 291
Kim, J.-B., **155**, 87
Kim, J.-H., **159**, 141; **160**, 389
Kim, K.-J., **155**, 87
Kim, S., **159**, 337
Kim, Y. H., **163**, 267
Kimura, T., **157**, 117
Kinbara, A., **163**, 67; **164**, 153, 169
Kino, T., **163**, 233, 261
Kiryushin, I. V., **162**, 365; **165**, 181
Kisiel, A., **157**, 1
Kitabatake, M., **163**, 175
Kitada, M., **158**, 167
Kitahara, S., **164**, 157
Kitajima, M., **156**, 231
Kjaer, K., **159**, 17, 29
Klepp, J., **155**, 39
Klusty, M., **159**, 369
Knoll, W., **159**, 323, 379; **160**, 251, 333, 501
Kobayashi, K., **158**, 233; **159**, 267
Kobayashi, S., **160**, 327
Kochowski, St., **165**, 21
Koenemann, D., **159**, 53
Koide, N., **163**, 415
Koleshko, V. M., **162**, 365; **165**, 181
Kolinsky, P. V., **160**, 355
Komoda, O., **156**, 127
Kopylov, Yu. L., **163**, 475
Korablev, V. V., **161**, 281
Korec, J., **162**, 21
Korhonen, A., **155**, 143
Korpiun, P., **160**, 501
Kosaka, Y., **161**, 305
Kouyama, T., **160**, 145
Kovacs, B., **164**, 1
Kovalev, A. N., **161**, 281
Kowel, S. T., **159**, 191; **160**, 379, 471
Koyano, M., **158**, 123
Kratschmer, W., **163**, 331
Kravchenko, W. B., **163**, 475
Krebs, J. J., **164**, 111
Krishnan, R., **164**, 405
Kristensen, R. D. L., **163**, 167
Krohn, M., **163**, 291
Krontiras, C., **161**, 197
Kruppa, W., **162**, 161
Ku, Y. H., **161**, 131
Kuisl, M., **157**, 129
Kuldeep, **164**, 33
Kulkarni, A., **164**, 339
Kulkarni, A. K., **164**, 435
Kumagai, Y., **156**, 345
Kumar, A., **165**, 99
Kumar, B., **161**, 139
Kumar, N., **164**, 417
Kumar, R., **164**, 357
Kumar, S., **161**, 101; **164**, 51, 265
Kundu, D., **163**, 273
Kuramochi, H., **161**, 123
Kurinec, S. K., **162**, 247
Kurita, S., **157**, 189
Kuroda, H., **161**, L83
Kuroda, S., **164**, 157
Kuroda, S.-I., **159**, 285, 435; **160**, 61, 139
Kustas, F. M., **163**, 365
Kutzler, F. W., **155**, 1
Kuwae, Y., **157**, 189
Kuwahara, K., **163**, 233, 261; **164**, 165
Kuzel, Jr., R., **156**, 53; **158**, 225
Kuznetsov, P. I., **163**, 475
Kwong, D. L., **161**, 131

L

La Via, F., **161**, 13
Lacey, D., **156**, 39
Lafait, J., **164**, 387
Lahav, M., **159**, 29
Lai, C., **164**, 435
Lam, J. Y. S., **160**, 379, 471
Landa, G., **155**, 331
Landau, E. M., **159**, 29
Lange, F., **163**, 181
Langeron, J. P., **161**, 249, L69
Lanza, P., **161**, 13
Larsen, A. N, **164**, 487
Latorre, D., **165**, L101
Lau, S. S., **162**, 287
Laxhuber, L. A., **159**, 387
Lecat, J. H., **164**, 43
Ledoux, I., **160**, 217
Lee, B., **164**, 417
Lee, J. G., **165**,149
Lee, M. L., **155**, 317
Leeuwis, H., **162**, 375
LeGrange, J. D., **159**, 101
Lehmann, U., **160**, 257
Leiserowitz, L., **159**, 29
Lepoutre, F., **155**, 165
Lequan, M., **156**, L27; **160**, 81
Lequan, R. M., **156**, L27; **160**, 81
Lesieur, P., **159**, 83, 315; **160**, 81
Levy, Y., **160**, 399
Lewin, R. W., **158**, 141
Leznoff, C. C., **159**, 141
Li, C.-J., **156**, 315

Li, F. M., **163**, 349
Li, T., **159**, 239
Li, Z. F., **163**, 55
Liang, Y.-C., **165**, 55
Liao, K., **165**, 173
Lieser, G., **159**, 221
Ligonzo, T., **158**, 217
Lin, B., **159**, 111
Lin, C.-C., **162**, 325
Lin, H. J., **156**, 259
Lin, J. S., **165**, 243
Lin, T., **163**, 267; **164**, 501
Lin, T. K., **164**, 195
Lin, Y. M., **155**, 317
Lingg, L. J., **159**, L57
Linsell, P., **156**, 11
Lipinski, A., **155**, L5
Lissberger, P. H., **162**, 89
Liu, D. C., **157**, 97
Livengood, R. E., **162**, 59
Llinares, C., **155**, 125
Lloyd, J. P., **160**, 431
Lloyd, J. R., **155**, 209
Long, R. G., **162**, 29
Lopez, S., **165**, 249
Los, St., **165**, 21
Loulergue, J. C., **160**, 399
Louw, C. W., **158**, 61
Luk, S. Y., **157**, 69
Luo, J.-K., **157**, 117
Luzanov, V. P., **163**, 475

M

Ma, X., **159**, 239
Ma, Y., **163**, 255
Maass, E., **159**, 405
MacDonald, J. R., **157**, 223
Machi, Y., **158**, 233
Machida, K., **161**, L91
Macleod, H. A., **164**, 391
Madey, T. E., **163**, 393
Maeda, A., **161**, L83
Maeda, T., **162**, 235
Mahan, J., **162**, 29
Mahdjoubi, L., **156**, L21
Maiti, C. K., **164**, 115
Maken, S., **155**, 115; **158**, 245
Malhotra, L. K., **155**, L15; **163**, 343; **164**, 233
Malik, N. A., **156**, 161
Malina, V., **164**, 1
Mallouky, A., **158**, 285
Manaila, R., 158, 299
Manda, E., **159**, 353; **160**, 61, 299
Mandal, K. C., **164**, 13
Mani, V. N., **163**, 437
Manory, R. R., **156**, 79
Mansingh, A., **161**, 101
Mao, G. M., **163**, 55
Maps, J., **156**, 271
Marathay, A. S., **164**, 391
Marathe, B. R., **164**, 261
Marchon, B., **155**, 227
Marciniak, A., **156**, 337
Marinkovic, Z., **156**, 105
Marinov, M., **157**, 315
Marsden, R., **156**, 39
Marshall, E. D., **162**, 287
Martev, I. N., **156**, 265; **161**, 249, L69
Martinez, A., **161**, 93; **162**, 13
Mathur, S. C., **164**, 249
Matsuda, A., **163**, 123
Matsuda, M., **155**, L11
Matsumoto, M., **159**, 353; **160**, 33, 61, 133, 139, 299
Matsushita, T., **159**, 435
Matsuzawa, M., **160**, 477
Maury, F., **155**, 331
Mauser, K. E., **157**, 325
Mayer, J. W., **162**, 199
Mayers, F. R., **157**, 69
McCarron III, E. M., **155**, 53
McGinty, G. K., **162**, 21
McHargue, C. J., **161**, 117
McIsaac, K., **163**, 285
McIver, J. K., **163**, 203
McKeown, N. B., **159**, 469
McLean, T., **160**, 217
McMahon, R. A., **163**, 337
McMillan, L., **164**, 339
McRoberts, A. M., **156**, 39
Meakin, D., **163**, 249
Meguro, T., **163**, 405
Mehra, N. C., **156**, 93
Mehrotra, B. N., **164**, 461
Mehta, B. R., **164**, 265
Meliga, M., **165**, 279
Melouah, A., **155**, 125
Melsheimer, J., **163**, 301
Messier, R., **164**, 187
Meyyappan, N., **155**, 97
Migliorato, P., **163**, 249
Mihama, K., **163**, 61
Mikami, O., **162**, 41
Milic, M., **163**, 309
Miller, A., **159**, 125
Miller L. S., **156**, 11
Milne, W. I., **163**, 237
Milosavljevic, M., **163**, 309; **164**, 493
Minami, T., **164**, 275, 363
Minel, L., **161**, L69
Minoura, H., **157**, 159
Miotkowska, S., **159**, L65; **165**, 91
Miotkowski, I., **159**, L65; **165**, 91
Misra, M. S., **163**, 365
Misra, N. K., **164**, 91
Mitra, N., **157**, 7
Miura, K., **160**, 165
Miyake, S., **158**, 51
Miyase, S., **156**, 127
Miyashita, T., **155**, L11
Miyoshi, S., **157**, 105
Mizokawa, Y., **156**, 127
Mobius, D., **159**, 73
Mohwald, H., **159**, 1, 17, 63, 115, 125, 379
Mojzes, I., **164**, 1
Molarius, J., **155**, 143
Montalan, D., **155**, 175
Montaner, A., **155**, 125
Montasser, K., **163**, 229
Moraga, L. A., **156**, 191
Morales de la Garza, L., **156**, 327
Moriizumi, T., **160**, 413, 463
Morikawa, A., **160**, 15
Morimoto, K., **160**, 279
Morinaka, A., **162**, 343
Morita, S., **163**, 229
Morlevat, J. P., **156**, 307
Morris, M. A., **156**, 65
Mowery, R., **159**, 369
Muller, H., **156**, 1
Muller, L., **157**, 325
Murakami, S., **164**, 363
Murali Sastry, M. S., **159**, L61
Murata, M., **160**, 21
Murri, R., **158**, 217
Musil, J., **156**, 53; **158**, 225
Mutsukura, N., **158**, 233

N

Nagao, T., **160**, 165
Nagel, G., **155**, 39
Nair, M. T. S., **161**, 21
Nair, P. K., **161**, 21
Nakahara, H., **159**, 34, 337; **160**, 43, 87, 153, 303
Nakajima, S., **162**, 273
Nakamura, T., **160**, 61, 133, 139, 299; **161**, 149; **164**, 213

Nakanishi, K., **156**, 145
Nakanishi, N., **157**, 189
Nakano, A., **160**, 303
Nakaoko, M., **162**, 145
Nakayama, J., **160**, 87
Namba, S., **163**, 405
Nanto, H., **164**, 275, 363
Napo, K., **157**, 291
Narayan, S., **164**, 339
Narayana, G. S., **164**, 91
Narlikar, A. V., **158**, L45
Naseem, S., **156**, 161
Navratil, K., **156**, 181; **162**, 101
Nayak, B. B., **164**, 75
Ndlela, Z., **159**, L53
Negishi, H., **158**, 123
Nender, C., **164**, 475
Newcomb, S., **164**, 199
Nguyen, N., **163**, 323
Nicolet, M.-A., **158**, 37, 45
Nieh, C. W., **161**, 263
Nigam, R. K., **155**, 115; **158**, 245
Niino, H., **160**, 33
Niklasson, G. A., **165**, 67
Nishikata, Y., **160**, 15
Nishiyama, K., **160**, 317
Nishizawa, J.-I., **163**, 149
Nitsch, K., **157**, 13
Noad, J. P., **163**, 399
Nobili, C., **163**, 111
Noda, T., **156**, 231
Noguchi, S., **157**, 181
Norian, K. H., **162**, 279
Noskov, A. G., **161**, 343; **162**, 129
Novotny, V., **159**, 359
Nowak, Z., **161**, 157

O

Ochiai, S., **159**, 267
Oehr, C., **155**, 65
Oehrlein, G. S., **156**, 207
Oelschlagel, U., **159**, 421
Offenhausser, A., **160**, 341
Ogale, S. B., **163**, 215
Ogata, N., **161**, 305
Ogawa, K., **159**, 91
Oguchi, K., **161**, 305
Oguri, K., **165**, 139
Ohlidal, I., **156**, 181; **162**, 101
Ohmori, A., **156**, 315
Ohta, S.-I., **162**, 73
Ohtani, A., **160**, 67
Ohuchi, F. S., **162**, 315
Okada, M., **156**, 231, 287; **164**, 95
Okamoto, K., **158**, 239; **163**, 387
Okane, I., **162**, 145
Okuyama, F., **165**, 193
Okuyama, K., **156**, 345
Oldale, J. M., **164**, 467
Oleszkiewicz, J., **157**, 1
Oliver, W. C., **161**, 117
Olowolafe, J. O., **161**, 181
Olt, V., **165**, 49
Onosato, T., **160**, 287
Ortiz, A., **165**, 249
Orton, J. W., **163**, 1
Osiander, R., **160**, 501
Otero, T. F., **162**, 209
Ottaviani, G., **163**, 111
Ouchi, A., **160**, 33
Oura, K., **164**, 37
Outka, D. A., **159**, 275
Owens, N. F., **155**, 255
Oyanagi, H., **159**, 435

P

Pagnia, H., **165**, 49
Pal, U., **164**, 85
Palacin, S., **159**, 83
Plamer, B. J., **158**, 313
Palto, S. P., **160**, 271
Palmer, W., **162**, 155
Pande, P. C., **164**, 313
Pandey, C. D., **161**, L79
Pandey, R. K., **164**, 255
Pandya, D. K., **164**, 51, 115
Pantchev, B. G., **161**, 85
Papanicolaou, N. A., **162**, 161
Papuchon, M., **160**, 399
Parikh, N. R., **163**, 455
Park, Y. J., **165**, 149
Pashmakov, B., **157**, 43
Patel, N. G., **162**, 263
Patrykiejew. A., **161**, 351, 367
Pattabi, M., **159**, L61
Patterson, L. K., **159**, 149
Patteson, L. K., **159**, 133
Pauleau, Y., **155**, 75
Pavelescu, C., **161**, L71
Peacock, N., **156**, 173
Pearson, C., **160**, 431
Peart, R. F., **161**, 333
Pecz, B., **164**, 1
Pedersen, A. S., **164**, 487
Penfold, J., **159**, 43
Peng, J. B., **159**, 111, 215
Penner, T. L., **160**, 241
Perez, R., **164**, 243
Perry, A. J., **157**, 255; **163**, 49
Perusko, D., **164**, 493
Peterson, I. R., **156**, 39; **160**, 209, 355; **161**, 325
Petersson, C. S., **161**, 197
Pethica, J. B., **159**, 293
Petty, M. C., **155**, 187; **159**, 461; **160**, 117, 177, 431, 483; **165**, L97
Phadke, S. D., **161**, 77; **164**, 345
Philip, R., **165**, 211
Phulkar, S., **164**, 21
Piel, J.-P., **160**, 217
Pillai, P. K. C., **164**, 357
Piotrowski, J., **161**, 157
Pocholle, J. P., **160**, 399
Polywka, M. E. C., **160**, 231
Ponce, M. T., **162**, 209
Popovic, N., **163**, 309
Porada, Z., **164**, 411
Porta, G. M., **158**, 189
Posadowski, W., **162**, 111
Post, G., **160**, 217
Potember, R. S., **165**, 317
Pouch, J. J., **157**, 97
Poulek, V., **158**, 225
Pourrezaei, K., **164**, 417
Pramanik, P., **158**, 271; **164**, 115
Prasad, J. J. B., **164**, 123
Prasad, P. N., **161**, 315
Prasad, R. N., **161**, 77; **164**, 345
Pretorius, R., **155**, 17
Price, R., **159**, 369
Prinz, G. A., **164**, 111
Priol, M., **164**, 69
Pronko, J. G., **165**, 243
Pu, L. S., **159**, 337

Q

Qadri, S. B., **164**, 111
Qayyum, A., **164**, 221

R

Rabe, J. P., **159**, 275, 359
Rabina, O., **162**, 183
Rabolt, J. F., **159**, 359; **160**, 311
Radnoczi, G., **158**, 299
Rai, A. K., **161**, 139
Rajalakshmi, R., **163**, 421
Rajan, K., **163**, 399
Rajopadhye, N. R., **161**, 187
Rajora, O. S., **164**, 81
Rakhshani, A. E., **157**, 87

Ramasamy, P., **163**, 297, 383, 437
Rancourt, J. D., **158**, 189
Rao, B. U. M., **164**, 191
Rao, T. S., **161**, 77; **163**, 399; **165**, 257
Rao, V. J., **164**, 21
Rastogi, A. C., **163**, 279; **164**, 481
Rastogi, R. S., **164**, 449
Ratcliffe, N. M., **155**, 187
Rathi, V. K., **164**, 309
Rauf, I. A., **156**, 161
Rauthan, C. M. S., **164**, 429
Ray, B. K. S., **165**, 257
Ray, S., **156**, 277; **162**, 119, 247; **164**, 217
Razykov, T. M., **162**, 257; **164**, 301
Reddy, K. V., **164**, 123
Reeson, K. J., **161**, 333
Reinbold, G., **160**, 347
Remy, J. C., **165**, 227
Rennie, J., **164**, 467
Renucci, J. B., **155**, 331
Resto, O., **164**, 243
Revenko, M. A., **163**, 497
Ribbing, C.-G., **164**, 5
Richard, J., **156**, L27; **159**, 207, 413; **160**, 53, 81; **161**; L73
Richardson, R. M., **159**, 43, 171, 231, 253, 395, 469
Richardson, T., **160**, 231
Rickerby, D. S., **157**, 195, 233
Rieck, U., **162**, 279
Riedling, K., **155**, 151
Riegler, H. E., **159**, 101
Rimini, E., **161**, 13
Ristovski, Lj., **157**, 59
Robach, Y., **162**, 81
Roberts, G. G., **155**, 187; **160**, 53, 117, 177, 231, 445, 491
Robin, P., **156**, 295; **160**, 399
Robins, J. L., **155**, 267; **163**, 285
Roger, J. P., **155**, 165
Rohrer, G., **164**, 339
Romeo, N., **157**, 175
Roos, A., **164**, 5
Roptin, D., **165**, 227
Roser, S. J., **159**, 43, 253, 395, 469
Rosler, R. S., **157**, 135
Rothberg, L., **160**, 373
Rothenhausler, B., **159**, 323
Roulliay, M., **156**, L27
Rousina, R., **157**, 345; **164**, 207
Rovai, G., **165**, 279
Royer, P., **155**, L1
Ruaudel-Teixier, A., **159**, 207, 315, 413; **160**, 81, 107
Rubanov, S. V., **163**, 497
Rubner, M. F., **160**, 187, 327
Russell, G. J., **161**, 325; **164**, 313

S

Safoula, G., **157**, 291
Saha, S., **164**, 85
Sahu, S. N., **163**, 167
Saini K. K., **164**, 327
Saito, G., **160**, 61
Saito, K., **159**, 285; **160**, 133, 139
Saito, M., **159**, 285; **160**, 133, 139
Sakai, Y., **156**, 287; **164**, 95
Sakata, H., **157**, 181
Sakuhara, T., **159**, 345
Salmenoja, K., **155**, 143
Samantaray, B. K., **164**, 85
Sanders, F. H. M., **161**, L87
Sandhu, G. S., **163**, 455
Sanui, K., **161**, 305
Saotome, Y., **160**, 453
Sasabe, H., **159**, 479; **160**, 145
Sasaki, M., **158**, 123
Sathianandan, K., **164**, 353
Sato, H., **164**, 275
Sato, M., **160**, 153
Satou, S., **162**, 73
Savvides, N., **163**, 13
Sawaki, N., **163**, 415
Scarlata, S. F., **159**, 101
Schabowska-Osiowska, E., **164**, 411
Schafer, D., **156**, 1; **162**, 217
Schalch, D., **155**, 301
Scharmann, A., **155**, 301
Schemelev, V. N., **155**, 285
Schiavulli, L., **158**, 217
Schiff, E. A., **164**, 239
Schirar, S., **155**, 125
Schmidt, G. F., **159**, 221
Schmidt, M. P., **155**, 227
Schoch, Jr., K. F., **165**, 83
Scholz, R., **158**, 255
Schouten, A. J., **159**, 221
Schrepp, W., **159**, 301
Schuster, M., **157**, 325
Schwarz, J. A., **155**, 209
Schweizer, E., **159**, 331
Scrowston, R. M., **156**, 39
Sealy, B. J., **162**, 49
Sears, W. M., **165**, 265
Segui, Y., **155**, 175
Seignac, A., **164**, 69
Sekiguchi, T., **160**, 299
Sekimoto, S., **162**, 235
Selfridge, R. H., **160**, 471
Sella, C., **164**, 387, 405; **165**, 29
Sen, S., **155**, 243
Sen, S. K., **155**, 243
Sernelius, B. E., **164**, 381
Sethi, R. S., **156**, 39
Setsune, K., **163**, 175
Setton, M., **156**, 351
Severn, J. K., **160**, 171
Shaikh, A. S., **161**, 273
Shalygina, N. A., **162**, 171
Shanker, K., **157**, 223
Sharma, G. D., **164**, 249
Sharma, J. K. N., **164**, 27
Sharma, K. C., **164**, 269
Sharma, R. P., **164**, 269
Sharma, S. K., **156**, 93, 307; **163**, 373; **164**, 33
Sheleg, M. U., **158**, 7
Shemet, V. V., **163**, 475
Shenoy, M. R., **163**, 461
Sherwin, M. E., **165**, 317
Shibasaki, Y., **160**, 43
Shibata, M., **160**, 327
Shih, K. K., **157**, 21
Shikama, T., **156**, 287; **164**, 95
Shillingford, H., **162**, 247
Shimidzu, T., **160**, 67
Shimizu, N., **158**, 167
Shimizu, S., **160**, 303
Shimomura, M., **160**, 287
Shinno, H., **164**, 95
Shinohara, H., **160**, 477
Shinzato, S., **164**, 165
Shiojiri, M., **162**, 235
Shirafuji, J., **157**, 105
Shivakumar, G. K., **157**, 345; **164**, 207
Shivaprasad, S. M., **163**, 393; **164**, 27
Shoji, F., **164**, 37
Shrivastava, S., **163**, 359
Shroff, N., **164**, 357
Simanovskis, A., **164**, 147
Simic, V., **156**, 105
Singh, A., **164**, 357
Singh, K., **164**, 265
Singh, K. C., **155**, 115; **158**, 245
Singh, S. K., **164**, 75

Singh, S. N., **163**, 373
Singh, S. P., **164**, 309
Sinha, A. P. B., **164**, 21
Sinovcevic, R., **164**, 375
Sitter, H., **163**, 241
Smestad, G., **159**, L53
Smith, D. A., **164**, 501
Snow, A., **159**, 369
Snow, A. W., **155**, 1
Snyman, J. A., **158**, 151
Sobhanadri, J., **161**, 171
Sofield, C. J., **157**, 29
Sokolova, G. A., **162**, 129
Sokolowska, Z., **161**, 367
Sokolowski, S., **161**, 367
Somaskandan, K., **163**, 297
Sonntag, J., **165**, 11
Spaggiari, C., **157**, 175
Spear, W. E., **163**, 85
Speck, K. R., **165**, 317
Spencer, A. G., **158**, 141
Spit, F. H. M., **164**, 199
Sprague, J. A., **165**, 359
Sproul, W. D., **157**, 255
Sribi, C., **158**, 81
Srikanth, K., **163**, 323; **164**, 187
Srinivasan, M. P., **159**, 191
Srinivasan, T., **161**, 171
Srivastava, A. K., **163**, 421, 443
Srivastava, P. K., **161**, 107
Sriyudthsak, M., **160**, 463
Stanchev, A., **155**, L5
Stano, S., **165**, 279
Staryga, E., **155**, L5
Stauf, G. T., **156**, 327, 631
Stefanelli, I., **159**, 83
Steffen, A., **162**, 21
Steiger, B., **162**, 217
Stenin, S. I., **161**, 343; **162**, 129; **163**, 497
Stepanova, T. S., **163**, 475
Stewart, R. T., **160**, 355
Stoemenos, J., **163**, 249, 491
Stohr, J., **159**, 275
Stolyarova, S. V., **164**, 147
Stoop, P. M., **158**, 151
Storck, W., **159**, 331
Straub, R., **157**, 325
Stroeve, P., **159**, 191; **160**, 379, 471
Subba Rao, G. V., **164**, 119
Subramanian, S., **163**, 443
Sudiwala, R. V., **160**, 171
Sugi, M., **159**, 285, 435; **160**, 61, 133, 139
Sugimoto., I., **158**, 51
Sugiura, T., **157**, 159
Suhr, H., **155**, 65; **157**, 81
Sukach, G. A., **162**, 67
Sun, D. C., **163**, 349
Sun, W. P., **156**, 259
Sun, Y. N., **157**, 351
Suni, I., **161**, 197
Suzuki, M., **160**, 453
Suzuki, T., **162**, 273
Svechnikov, S. V., **162**, 67
Swalen, J. D., **159**, 275, 359; **160**, 197, 311
Swart, H. C., **158**, 61

T

Tada, K., **165**, 55
Tadokoro, T., **162**, 73
Tagaki, W., **159**, 353; **160**, 33
Taguirov, I. R., **155**, 285
Takada, K., **165**, 337
Takagi, T., **157**, 143
Takahashi, H., **159**, 353
Takahashi, T., **160**, 303
Takaoka, H., **157**, 143
Takaoka, K., **159**, 267
Takashi, H., **160**, 33
Takata, S., **164**, 275, 363
Takei, J., **161**, 123
Taketa, Y., **162**, 7
Takimoto, K., **160**, 145
Takwale, M. G., **164**, 261
Tamagno, S., **165**, 279
Tamura, H., **159**, 91
Tamura, S., **159**, 353; **160**, 33
Tanaka, K., **157**, 35; **163**, 123
Tanaka, M., **159**, 353; **160**, 299
Tanemura, M., **165**, 193
Tansley, T. L., **163**, 255, 479; **164**, 441
Tarey, R. S., **163**, 359
Targove, J. D., **159**, L57
Taylor, L. T., **158**, 189
Temofonte, T. A., **165**, 83
Tersoff, J., **161**, 197
Thevenard, P., **165**, 347
Thomson, A. J., **159**, 469
Thrum, F., **164**, 455
Thutupalli, G. K. M., **164**, 103
Thyagarajan, K., **163**, 461
Tian, K., **159**, 239
Tieke, B., **160**, 407
Timofeeva, G. V., **162**, 171
Tippmann-Krayer, P., **159**, 17, 387
Todd, A. G., **161**, 235
Tomar, M. S., **164**, 295
Tomar, V. S., **158**, L45
Tomioka, A., **159**, 479
Tong, B. Y., **164**, 481
Tonneau, D., **155**, 75
Toor, I., **162**, 247
Torresi, R. M., **162**, 353
Towner, J. M., **161**, 289
Toyne, K. J., **156**, 39
Toyoshima, I., **161**, L91
Tredgold, R. H., **155**, 343; **160**, 99
Trefny, J., **157**, 7
Treilleux, M., **165**, 347
Trifonova, E. P., **161**, 257
Tripathi, S. K., **165**, 99
Tripathy, K. N., **161**, L79
Trukhanov, E. M., **162**, 129
Tselepis, E., **161**, 207; **164**, 289
Tseytlin, G. M., **161**, 343
Tu, K. N., **163**, 43; **164**, 199
Tu, Y.-K., **162**, 325
Tushaus, M., **159**, 331

U

Uekita, M., **160**, 21
Uen, T. M., **158**, 69
Ueno, Y., **157**, 159
Uma, C. S., **155**, L15
Uozumi, K., **164**, 183
Uphaus, R. A., **159**, 141; **160**, 389
Urosevic, V. V., **157**, 59
Usher, B. F., **155**, 267
Utsunomiya, M., **164**, 321
Uzagare, D. M., **155**, 31

V

Valvoda., V., **156**, 53; **158**, 225
van der Spiegel, J., **156**, 351
Vandevyver, M., **156**, L27; **159**, 207, 243, 315, 413; **160**, 81; **161**, L73
Vankar, V. D., **161**, 107; **164**, 449
Varadaraju, U. V., **164**, 119
Varchenya, S. A., **164**, 147
Varghese, J., **157**, 87
Vateva, E., **157**, 43
Vaya, P. R., **161**, 171
Vedam, K., **163**, 323
Vengatesan, B., **163**, 297
Venos, R., **162**, 155
Veresegyhazy, R., **164**, 1

Verona, E., **157**, 169
Verspui, G., **161**, 687
Vest, R. W., **161**, 273
Vidal, B., **165**, 211
Vignes, J.-L., **161**, 249
Viscuso, O., **161**, 13
Vlahovici, N., **161**, 671
Vlieger, J., **164**, 57, 63
Vodenicharov, C., **155**, 605
Vogel, V., **159**, 73, 429
Voigtmann, R., **165**, 11
Voklein, F., **155**, 197
von Frieling, M., **159**, 331, 451
Vook, R. W., **163**, 447

W

Wakabayashi, T., **159**, 479
Walder, A. J., **156**, 11
Walher, H. G., **156**, 1
Wan, J.-C., **156**, 271
Wang, D.-H., **158**, L39
Wang, H., **163**, 349
Wang, J., **162**, 305
Wang, S. Q., **162**, 199
Wang, W., **165**, 173
Wang, W.-C., **156**, L17
Wang, W.-S., **162**, 325
Wang, Z.-H., **156**, L17
Ward, R. C., **159**, 43
Warkusz, F., **161**, 1
Warmack, R. J., **155**, L1
Warner, J. D., **157**, 97
Wasa, K., **163**, 175
Watanabe, K., **164**, 169
Watanabe, M., **161**, 305
Webb, J. B., **163**, 399
Webber, P. R., **156**, 65
Wegner, G., **159**, 221
Weiss, D. S., **158**, 175
Weisweiler, W., **155**, 39
Weisz, Z., **164**, 243
Welland, M. E., **159**, 293
Welsch, E., **156**, 1
Wetzel, J. T., **163**, 267
White, K., **161**, 139
Wiktorczyk, T., **157**, 13
Wilke, W., **159**, 421
Wilkie, J. H., **162**, 49
Williams, J. O., **157**, 69
Williamson, D. L., **163**, 365
Willig, F., **159**, 331
Willis, A. J., **165**, 77
Wilson, D. J., **165**, 217
Wilson, E. G., **160**, 171
Wilson, I. H., **164**, 493
Wilson, J. I. B., **164**, 221
Winch, P. J., **159**, 159
Wind, M. M., **164**, 57
Wohltjen, H., **155**, 1
Wolf, R., **156**, 1; **162**, 217
Wolf, S. G., **159**, 29
Wolfrat, R., **155**, 301
Woll, C., **159**, 429
Woods, J., **164**, 313

X

Xin, L., **163**, 255
Xu, J. J., **161**, 273

Y

Yabe, A., **160**, 33
Yadav, A. D., **163**, 317
Yakuscheva, G. G., **163**, 475
Yalamanchi, R. S., **164**, 103
Yamada, H., **160**, 125; **163**, 233, 261
Yamada, Y., **164**, 213
Yamagishi, H., **160**, 463
Yamaguchi, H., **157**, 117
Yamanaka, H., **165**, 55
Yamauchi, Y., **164**, 95
Yanagisawa, M., **160**, 453
Yang, H.-Y., **158**, 37, 45
Yang, K., **162**, 305
Yang, M. H., **155**, 317
Yarwood, J., **155**, 187; **159**, 461; **160**, 483
Yi, K. S., **155**, 87
Yoden, T., **161**, 305
Yokoyama, M., **162**, 73
Yoneyama, M., **159**, 435; **160**, 133, 165
Yonezu, H., **164**, 213
Yoon, S.-G., **165**, 291
Yoshida, A., **164**, 213, 321
Yoshida, H., **155**, L11
Yoshida, M., **159**, 479
Yoshida, T., **162**, 343
Yoshimoto, Y., **162**, 273
Youn, K., **164**, 405
Yu, N., **163**, 455
Yu, Z. Q., **163**, 349
Yudasaka, M., **156**, 145; **157**, 189
Yudin, S. G., **160**, 271
Yugo, S., **157**, 117

Z

Zafar, S., **164**, 239
Zaharov, L. Yu., **163**, 475
Zalar, A., **164**, 129
Zang, X. R., **163**, 55
Zdanowicz, T., **164**, 175
Zekovic, Lj. D., **157**, 59
Zemel, J. N., **157**, 49; **163**, 189; **165**, 109
Zhang, L., **161**, 67
Zhang, Z.-M., **156**, L17
Zhang, Z. G., **156**, 65
Zhao, X.-A., **158**, 45
Zhao, X.-A., **158**, 37
Zhao, Y., **159**, 239
Zheng, J.-B., **156**, L17
Zhu, Z., **159**, 239
Ziegler, D., **163**, 301
Zimba, C. G., **160**, 311
Zimmerman, R., **165**, L101
Zini, L., **157**, 175
Zorc, H., **164**, 375
Zotov, N. S., **161**, 223
Zscherpe, G., **162**, 217
Zurawsky, W. P., **159**, 101
Zyss, J., **160**, 217

Cumulative Subject Index for Volumes 155–165

The volume numbers are given in bold-face type preceding the page numbers.

A

Acceptors
- electron transfer quenching of excited pyrene or Ru(II)(bpy)$^{+}$ derivatives in Langmuir–Blodgett films by donor or acceptor molecules with different redox potentials, **160**, 317
- molecular photodiodes consisting of unidirectionally oriented amphipathic acceptor–sensitizer–donor triads, **160**, 125

Acoustoelectric devices
- the properties of conducting tetracyanoquinodimethane Langmuir–Blodgett films: a study using acoustoelectric devices, **160**, 53

Acrylonitrile
- a few electronic properties of thin films on plasma-polymerized acrylonitrile, **161**, 187
- photovoltaic properties of thin films of plasma-polymerized acrylonitrile, **162**, 333

Adatoms
- equilibrium interaction potential and height of an argon adatom on an Ar(001) crystal surface, **158**, 151
- interpretation of attenuated total reflection changes induced by a submonolayer of caesium adatoms on silver films, **156**, 21

Adhesion
- adhesion measurement of non-metallic thin films using a scratch method, **163**, 67
- adhesion of thin metallic films to non-metallic substrates, **164**, 147
- internal stress and adhesion of r.f.-sputtered MgO films on glass substrates, **164**, 169
- measurement of the adhesion of silver films to oxidized silicon, **164**, 153
- the scratch adhesion test: an elastic–plastic indentation analysis, **157**, 233
- a study of the adhesion of vacuum-evaporated polyethylene films to aluminium, **157**, 43

Adsorption
- change in water vapour adsorption kinetics in chemically vapour deposited SiO_2 films after ion irradiation, **161**, 343
- orientational effects in adsorption
  - IV: application of the van der Waals theory to the description of submonolayer films of linear molecules on solid surfaces, **161**, 367
- phase transition in adsorbed layers
  - IX: the influence of geometric and energetic factors on gas–liquid–solid equilibria in two-component monolayers formed on crystalline solid surfaces, **161**, 351

Aggregation
- aggregation of cyanine dyes at Langmuir–Blodgett monolayers, **160**, 257
- energy transfer and aggregation in monolayers containing porphyrins and phthalocyanines, **159**, 115

Aluminium
- Al–PbO–Ag as a solid electrolyte cell, **155**, 31
- characterization and microhardness measurement of electron-beam-evaporated alumina coatings, **165**, 163
- compositionally graded $Al_xGa_{1-x}As$ films for millimetre wave frequency conversion, **163**, 479
- densification of aluminium fluoride thin films by ion-assisted deposition, **159**, L57
- depth profile measurements of aluminium film on phosphorus-doped hydrogenated amorphous silicon layers by Auger electron spectroscopy, **155**, 325
- determination of the depth–concentration profile of the transition layer in $Ga_{1-x}Al_xGaAs$ heterostructures by X-ray photoelectron spectroscopy, **155**, 285
- dielectric relaxation in Co–Al_2O_3 composite films, **165**, 67

© Elsevier Sequoia/Printed in The Netherlands

effect of applied external magnetic field on the relationship between the arrangement of the substrate and the resistivity of aluminium-doped ZnO thin films prepared by r.f. magnetron sputtering, **164**, 275
electrical characteristics of ion-beam-synthesized aluminium oxide layers, **163**, 317
electrical and structural properties of concentrated Cr(Al) thin films, **165**, 11
gas phase aluminide coatings on nickel-base superalloy IN 713, **156**, 259
growth of Al–Mn quasicrystals by vacuum deposition, **163**, 61
investigation of the porosity of thin anodic Al_2O_3 films by interference of photoluminescence radiation, **157**, 59
investigation of plasma-grown planar alumina films for use in the modelling of bulk alumina, **155**, 133
ion beam sputter deposition of low loss Al_2O_3 films for integrated optics, **165**, 1
ion beam suppression of hillock growth in aluminium thin films, **156**, 173
low temperature growth of AlN and Al_2O_3 films by the simultaneous use of a microwave ion source and an ionized cluster beam system, **157**, 143
low temperature liquid phase epitaxial growth and characterization of $Al_xGa_{1-x}As$, **163**, 443
molecular beam epitaxy of AlAs/GaAs heterostructures and superlattices, **163**, 1
optical properties of sputtered AlN films and coated GaAs, **158**, L39
reactively sputtered ZnO:Al films for energy-efficient windows, **164**, 381
studies of the interaction between aluminium and nickel, chromium and nichrome alloy films, **162**, 171
a study of the adhesion of vacuum-evaporated polyethylene films to aluminium, **157**, 43
thin film interaction of aluminium and hafnium: influence of copper and silicon, **161**, 235
time domain responses of the Al/Dy203/Al thin film capacitors and their a.c. characteristics, **157**, 13

Ammonia
study of sputtered ZnO–Pd thin films as solid state H_2 and NH_3 gas sensors, **157**, 169

Amorphization
X-ray diffraction study of phase composition and amorphization in magnetron-sputter-deposited thin films of stainless steel–titanium, **161**, 223

Amorphous films
amorphous alloy formation by solid state reaction, **163**, 43
growth processes in amorphous metallic films: a computer simulation, **158**, 299
multilayer amorphous semiconductors, **163**, 55

Anisotropy
fluorescence anisotropy studies of orientational order of Langmuir–Blodgett multilayers, **159**, 101

Annealing
annealing behaviour of extremely low energy beryllium implantation into $Ga_{0.4}$–$In_{0.53}As$, **156**, 239
dependence of PtSi Schottky diode electrical behaviour on the platinum film thickness and on the annealing process, **161**, 13
effect of n^+-polycrystalline silicon rapid thermal annealing on the electrical properties of the gate oxide, **162**, 21
electrical characteristics of PtSi formed by incoherent light annealing, **164**, 487
high temperature stability of plasma-enhanced chemically vapour deposited titanium silicide due to two-step rapid thermal annealing, **157**, 135
implantation damage control of silicon indiffusion during rapid thermal annealing of InP using AlN/Si_3N_4 as an encapsulant, **162**, 49
molybdenum disilicide formation by ion beam mixing and rapid thermal annealing of Mo/Si(111), **164**, 449
nitrogen migration and nitride formation during low temperature reactive annealing of titanium, **156**, 117
rapid thermal annealing of arsenic-implanted silicon: a review, **165**, 109
rapid thermal annealing of arsenic–phosphorus (n^+–n^-) double-diffused shallow junctions, **161**, 131
a study of annealing effects on deep level profile distributions in GaAs by capacitive methods, **162**, 13
synthesis of buried silicon nitride layers by rapid thermal annealing, **164**, 429

Anodic films
anodic oxidation of niobium in aqueous solution of weak organic acids, **155**, 115
some electrical properties of the GaAs–anodic oxide interface on the basis of measurements of the capacitance–voltage and conductance–voltage characteristics of metal–oxide–semiconductor structures, **165**, 21
growth kinetics of thin anodic oxides of silicon and its dependence on phosphorus concen-

tration in silicon, **163**, 373
kinetics of growth of anodic oxide film on niobium in aqueous electrolyte, **158**, 245
photovoltaic study of anodically grown oxide films on Ag–Cu alloys, **161**, 207
voltametric behaviour of anodic titanium oxide films close to the hydrogen evolution reaction, **162**, 353
Antimony
characterization of heteroepitaxial InSb films on GaAs prepared by metalorganic magnetron sputtering, **163**, 399
effect of electron irradiation on the growth of thin antimony layers deposited on collodion and on carbon in a vacuum of 10^{-4} Pa, **161**, 123
long-time air oxidation and oxide–substrate reactions on GaSb, GaAs and GaP at room temperature studied by X-ray photoelectron spectroscopy, **156**, 127
non-destructive determination of free carrier density of epitaxial layers of GaSb by IR reflectivity measurement, **155**, 125
thermoelectric properties of $Bi_{1-x}Sb_x$ films with $0 < x < 0.3$, **155**, 197
X-ray emission spectroscopy study of substoichiometric $Bi_{2-x}Sb_xS_3$ system, **164**, 75
Argon
equilibrium interaction potential and height of an argon adatom on an Ar(001) crystal surface, **158**, 151
Arsenic
annealing behaviour of extremely low energy beryllium implantation into $Ga_{0.4}$–$In_{0.53}As$, **156**, 239
Au–Ge/In ohmic contacts to n-type GaAs, **165**, 77
characterization of heteroepitaxial InSb films on GaAs prepared by metalorganic magnetron sputtering, **163**, 399
compositionally graded $Al_xGa_{1-x}As$ films for millimetre wave frequency conversion, **163**, 479
determination of the depth–concentration profile of the transition layer in $Ga_{1-x}Al_x$/GaAs heterostructures by X-ray photoelectron spectroscopy, **155**, 285
doping of liquid phase epitaxial layers of InGaAsP with group IV elements, **163**, 421
effect of deposition rate on structure and properties of As_2S_3 film, **161**, 139
effect of a temperature gradient on arsenic diffusion in silicon, **157**, 49
efficiencies of InAs transport and epitaxial growth by chemical vapour deposition in the system InAs–$AsCl_3$–H_2, **161**, 257
some electrical properties of the GaAs–anodic oxide interface on the basis of measurements of the capacitance–voltage and conductance–voltage characteristics of metal–oxide–semiconductor structures, **165**, 21
Fermi level pinning and chemical interactions at metal/metal organic CVD grown GaAs interfaces: Schottky barrier height, **164**, 21
light intensity dependence of photodarkening in amorphous As_2S_3 films, **157**, 35
long-time air oxidation and oxide–substrate reactions on GaSb, GaAs and GaP at room temperature studied by X-ray photoelectron spectroscopy, **156**, 127
low temperature liquid phase epitaxial growth and characterization of $Al_xGa_{1-x}As$, **163**, 443
molecular beam epitaxy of AlAs/GaAs heterostructures and superlattices, **163**, 1
monolayer growth and direct writing of GaAs by pulsed laser metal–organic vapour phase epitaxy, **163**, 405
new models for ohmic contacts to GaAs, **164**, 435
optical properties of the thermal oxide–GaAs rough interface, **155**, 217
optical properties of sputtered AlN films and coated GaAs, **158**, L39
properties of undoped and manganese-doped InGaAsP grown by liquid phase electroepitaxy, **163**, 427
Raman scattering analysis of disorder in heterogeneous $(GaAs)_{1-x}(SiC_2{:}H)_x$ films grown by metal–organic chemical vapour deposition, **155**, 331
rapid thermal annealing of arsenic-implanted silicon: a review, **165**, 109
rapid thermal annealing of arsenic–phosphorus (n^+–n^-) double-diffused shallow junctions, **161**, 131
a study of annealing effects on deep level profile distributions in GaAs by capacitive methods, **162**, 13
study of the growth mechanism of modulated structures in the InAs–GaAs system, **163**, 497
study of thermodynamic processes in the hot wall reactor for the growth of high quality CdTe on GaAs, **163**, 241
superlattice $ZnS_xSe_{1-x}/ZnS_ySe_{1-y}$ on (100) GaAs obtained by a photoassistant metal–organic chemical vapour deposition method, **163**, 475
Attenuated total reflection

interpretation of attenuated total reflection changes induced by a submonolayer of caesium adatoms on silver films, **156**, 21
isothermal desorption study of organic molecules in Langmuir–Blodgett films using attenuated total reflection, **156**, L17
Auger electron spectroscopy
a comparative Rutherford backscattering spectrometry and Auger electron spectroscopy depth profile study of Fe–N films, **161**, L69
a comparative study of thin film diffusion measurements in metallic glasses by Rutherford backscattering spectrometry and Auger electron spectroscopy, **164**, 33
depth profile measurements of aluminium film on phosphorus-doped hydrogenated amorphous silicon layers by Auger electron spectroscopy, **155**, 325
preparation of W–C thin films by reactive r.f. sputtering and Auger electron spectroscopy surface characterization, **161**, L91
study of surface segregation of simultaneously evaporated Mn–Ag alloy films by means of ion scattering spectroscopy and Auger electron spectroscopy, **164**, 37
topographical features of N^{2+}-sputtered metal sandwiches: their correlation with Auger depth resolution, **165**, 193
Azobenzenes
Langmuir–Blodgett films of non-centrosymmetric azobenzene dyes for non-linear optical applications, **160**, 363
photoisomerization of the azobenzenes included in Langmuir–Blodgett films of cyclodextrins, **160**, 33
X-ray diffraction and optical studies of Langmuir–Blodgett films formed from azobenzene derivatives, **155**, 343

B

Barium
screen-printed superconducting films of Y–Ba–Cu–O, **158**, L45
structural and electrical properties of screen-printed thick films of $YBa_2Cu_3O_{7-x}$ superconductors, **164**, 115
superconductivity behaviour in screen-printed $YBa_2Cu_3O_7$ films, **164**, 119
Barriers
cosputtered $W_{75}C_{25}$ thin film diffusion barriers, **158**, 45
failure mechanisms of TiN thin film diffusion barriers, **164**, 417
metal film barriers against the evaporation of volatile components during the heat treatment of metal–compound semiconductor contacts, **164**, 1
Beryllium
annealing behaviour of extremely low energy beryllium implantation into $Ga_{0.4}$–$In_{0.53}As$, **156**, 239
Bilayers
characterization of monolayer and bilayer (polymer/monolayer) structures for their use as a lubricant, **160**, 453
Bismuth
thermoelectric properties of $Bi_{1-x}Sb_x$ films with $0 < x < 0.3$, **155**, 197
X-ray emission spectroscopy study of sub-stoichiometric $Bi_{2-x}Sb_xS_3$ system, **164**, 75
Bleaching
bleaching of exciton transition in Langmuir–Blodgett films of polydiacetylene, **160**, 373
Boron
characterization of $Ti_{1-x}B_x$ films deposited by a co-sputtering method, **164**, 95
deposition of TiB_2 films by a co-sputtering method, **156**, 287
preparation, properties and applications of boron nitride thin films, **157**, 267
quantitative X-ray fluorescence analysis of boron in thin films of borophosphosilicate glasses, **157**, 325
study of boron coatings, **164**, 135
Buffer layer
effects of the buffer layer in metal–organic vapour phase epitaxy of GaN on sapphire substrate, **163**, 415

C

C49 structure
the metastable C49 structure in sputtered $TiSi_2$ thin films, **158**, 255
Cadmium
aligned textures in multilayers of cadmium arachidate as seen by electron microscopy, **159**, 405
application of spectroscopic ellipsometry to study the effect of surface treatments on cadmium telluride films, **164**, 265
characterization of chemically modified CdTe surfaces, **164**, 13
conduction processes in inhomogeneous $CdSe_xTe_{1-x}$ semiconductors, **158**, 25
d.c. electrical properties of evaporated thin films of CdTe, **164**, 281
dislocations in epitaxial $Cd_{0.9}Mn_{0.1}Te$ films, **159**, L65

effect of bath temperature on the optoelectronic characteristics of chemically deposited CdS thin films, **161**, 21
the effects of temperature and bias illumination on the spectral sensitivity of CdS–CuxS heterojunctions, **164**, 313
electrodeposition technique and properties of semiconducting cadmium chalcogenide thin films from aprotic electrolytes, **163**, 279
energy transfer between fluorescent dyes spaced by multilayers of cadmium salts of fatty acids, **160**, 347
fabrication and crystallophysical properties of $(ZnSe)_x(CdTe)_{1-x}$ $(x = 0–1)$ multicomponent system films, **162**, 257
Fourier transform IR spectroscopy of protonated cadmium arachidate layers in different positions of a perdeuterated multilayer, **159**, 443
HgCdTe thin films for solar cells application prepared by multisource evaporation, **157**, 175
high capability, quasi-closed growth system for isothermal vapour phase epitaxy of (Hg, Cd)Te, **161**, 157
medium angle X-ray scattering of Langmuir–Blodgett films of cadmium salts of fatty acids, **159**, 421
microstructural, optical and electrical studies of sputtered epitaxial CdTe films, **163**, 409
a novel electroplating technique for cadmium telluride films in non-aqueous medium, **164**, 255
optical constants of $Cd_{1-y}Mn_y$ Te thin films, **165**, 91
photoelectrical properties of H^+-implanted CdS thin films, **156**, L21
photovoltaic properties of ZnO/p-CdTe thin film heterojunctions, **164**, 295
research on radiative recombination centre formation in photoconductive cadmium sulphide and selenide films, **162**, 67
structural characterization of thin films of cadmium telluride, **164**, 85
study of thermodynamic processes in the hot wall reactor for the growth of high quality CdTe on GaAs, **163**, 241

Caesium
interpretation of attenuated total reflection changes induced by a submonolayer of caesium adatoms on silver films, **156**, 21

Calcium
a high resolution transmission electron microscopy study of ZrO_2–CaO films, **162**, 235

Capacitance–voltage properties
capacitance–voltage properties of thin Ta205 films on silicon, **156**, 207

Capacitive methods
a study of annealing effects on deep level profile distributions in GaAs by capacitive methods, **162**, 13

Capacitors
time domain responses of the $Al/Dy_2O_3/Al$ thin film capacitors and their a.c. characteristics, **157**, 13

Carbon
characterization of cosputtered tungsten carbide thin films, **158**, 37
cosputtered $W_{75}C_{25}$ thin film diffusion barriers, **158**, 45
deposition of hard carbon films by the r.f. glow discharge method, **158**, 233
deposition of Si_xC_{1-x}:H films by reactive r.f. sputtering, **155**, 39
effect of mixing ions on the formation process of β-SiC fabricated by ion beam mixing, **157**, 117
effect of mixing oxygen or diborane on the formation of amorphous carbon films from methane by r.f. plasma chemical vapour deposition, **163**, 229
the effect of stoichiometry on sputtering, deuterium retention and surface damage in titanium carbide films, **156**, 231
growth and properties of glow-discharge hydrogenated amorphous silicon–carbon alloys from silane–propane mixtures, **164**, 221
high-dose carbon ion implantation studies in silicon, **163**, 323
hydrogenated amorphous Si–C alloy prepared by chemical vapour deposition, **164**, 213
investigations of r.f.-plasma-deposited diamond-like carbon coatings, **164**, 103
low temperature growth of pyrolytic carbon with well-ordered graphite structure by chemical vapour deposition, **162**, 273
mechanical properties of r.f. magnetron-sputtered W–C films on stainless steel, **161**, 107
microstructural study of carbon black–polyimide thick films, **162**, 279
optical absorption and hydrogen content of plasma-deposited carbon films, **157**, 29
optical analysis of inhomogeneous weakly absorbing thin films by spectroscopic reflectometry: application to carbon films, **162**, 101
plasma-assisted chemical vapour deposition of TiN and TiC on steel: properties of coatings, **165**, 139
plasma deposition of amorphous hydrogenated

carbon films on III–V semiconductors, **157**, 97
positron lifetime study of vacancy defects in non-stoichiometric TiN_x and TiC_x films, **163**, 49
preparation of W–C thin films by reactive r.f. sputtering and Auger electron spectroscopy surface characterization, **161**, L91
pulsed-laser-induced and ion-beam-induced surface synthesis and modification of oxides, nitrides and carbides, **163**, 215
Raman scattering analysis of disorder in heterogeneous $(GaAs)_{1-x}(SiC_2{:}H)_x$ films grown by metal–organic chemical vapour deposition, **155**, 331
structure of reactively sputtered chromium–carbon films, **156**, 307
structure and properties of W/C and Ni/C multilayer films, **164**, 405
the temperature dependence of electron emission from a discontinuous carbon film device between silver film electrodes, **158**, 207
TiC and TiN coatings formed on Si_3N_4–TiC composite ceramics by chemical vapour deposition, **165**, 149

Cells
thin film solid state cells using $Rb_4Cu_{16}I_7Cl_{13}$ electrolyte and their limitations, **164**, 345

Ceramics
electrochemical method to evaluate the connected porosity in ceramic coatings, **156**, 315
low-voltage-driven ZnS:Mn thin film electroluminescent devices using insulating dielectric ceramic sheets, **164**, 363
polymer–ceramic composite materials with high dielectric constants, **158**, 93
synthesis and characterization of cordierite-based ceramic thin films, **162**, 315
thin film processes for compound oxide ceramics of perovskite structure, **163**, 175
TiC and TiN coatings formed on Si_3N_4–TiC composite ceramics by chemical vapour deposition, **165**, 149

Cermets
adjustable selective profiles using cermet absorbing films, **164**, 387
electric properties of Ti–Si–N thin cermet films deposited in a triode sputtering system with a hot cathode, **162**, 111

Chalcogenides
a comparative study of silver photodoping in chalcogenide films by means of extended X-ray absorption fine structure and kinetics measurements, **164**, 467
the depth profile of the elements in lead chalcogenide layers, **161**, 281
electrodeposition technique and properties of semiconducting cadmium chalcogenide thin films from aprotic electrolytes, **163**, 279
exposure characteristics of electron-beam-induced silver doping and its application to grating device fabrication in chalcogenide glass films, **165**, 55

Charge
charge incorporation in ω-tricosenoic acid Langmuir–Blodgett multilayers, **160**, 177

Chemical conversion
black nickel–cobalt: selective coatings prepared by a conversion process, **156**, 93
reply to comments on "Spectrally selective surfaces on stainless steel produced by chemical conversion", **155**, L15

Chemical vapour deposition
CO_2-laser-induced chemical vapour deposition of polycrystalline silicon from silane, **155**, 75
direct UV photoenhanced chemical vapour deposition of a-Si:H from disilane using a deuterium lamp, **163**, 237
effects of the buffer layer in metal-organic vapour phase epitaxy of GaN on sapphire substrate, **163**, 415
the effects of deposition variables on deposition rate in the chemical vapour deposition of silicon nitride, **155**, 87
efficiencies of InAs transport and epitaxial growth by chemical vapour deposition in the system InA–$AsCl_3$–H_2, **161**, 257
f.c.c. niobium films grown by halide chemical vapour deposition on ultrasound-vibrating substrates, **158**, 123
the growth of polycrystalline silicon films by low pressure chemical vapour deposition at relatively low temperatures, **163**, 249
high rate jet plasma-assisted chemical vapour deposition, **158**, 265
laser-induced chemical vapour deposition and characterization of amorphous silicon oxide films, **157**, 105
local equilibrium model of morphological instabilities in chemical vapour deposition, **158**, 313
low temperature growth of pyrolytic carbon with well-ordered graphite structure by chemical vapour deposition, **162**, 273
medium optical index material tailoring by plasma-enhanced chemical vapour deposition, **164**, 375
organometallic chemical vapour phase deposition of "Mn_2Si", **156**, 327
plasma-assisted chemical vapour deposition of

TiN and TiC on steel: properties of coatings, **165**, 139
thermodynamic investigation of selective tungsten chemical vapour deposition: influence of growth conditions and gas additives on the selectivity in the fluoride process, **158**, 107
thin palladium films prepared by metal–organic plasma-enhanced chemical vapour deposition, **157**, 81
TiC and TiN coatings formed on Si_3N_4–TiC composite ceramics by chemical vapour deposition, **165**, 149
Chlorine
density of states in a-Si:H,Cl determined by space-charge-limited currents, **158**, 217
study of the properties of thin films of hexagonal selenium doped with chlorine, **157**, 291
thin film solid state cells using $Rb_4Cu_{16}I_7Cl_{13}$ electrolyte and their limitations, **164**, 345
Chlorophyll
measurement of fluorescence depolarization for chlorophyll-a and chlorophyll-b in spread monolayers at the nitrogen–water interface, **159**, 149
Chromium
d.c. conductivity of highly disordered NiCr–O thin films, **164**, 455
the effectiveness of chromium and TiW as diffusion barriers for AuZn/Au contacts in InP junction field effect transistors, **162**, 161
electrical and structural properties of concentrated Cr(Al) thin films, **165**, 11
investigation of sliding contact resistance of Ni–Cr/Au and Ni–Cr/Au–SiO2 thin resistive films, **164**, 129
structural, optical and electrical properties of evaporated and sputtered Au–Cr thin films, **165**, 29
structure of reactively sputtered chromium–carbon films, **156**, 307
studies of the interaction between aluminium and nickel, chromium and nichrome alloy films, **162**, 171
Chromophores
thermochromic Langmuir–Blodgett films of a novel amphiphilic azo dye with homogeneous chromophore orientation, **160**, 407
Clusters
interaction of metal clusters with substrate steps, **163**, 291
the role and structure of microclusters in metal deposition onto weak-bonding substrates, **163**, 285
Cobalt
black nickel–cobalt: selective coatings prepared by a conversion process, **156**, 93
comparison of the electrical properties of polyimide films containing surface metal oxide: cobalt oxide *vs.* tin oxide, **158**, 189
dielectric relaxation in Co–Al_2O_3 composite films, **165**, 67
intermixing of Co/Gd_xO_y thin films on kapton polyimide, **157**, 223
reactions of Co/Mo bilayers and amorphous $Co_{50}Mo_{50}$ alloy films with silicon substrates, **162**, 199
Composition
application of X-ray photoelectron spectroscopy and Fourier transform IR reflection absorption spectroscopy to studies of the composition of Langmuir–Blodgett films, **159**, 267
film thickness and composition determination for binary alloys using backscattered electrons, **165**, 217
Computer studies
computer design of optical coatings, **163**, 97
growth processes in amorphous metallic films: a computer simulation, **158**, 299
Contact angles
measurements of the forces of emersion and immersion and contact angles during Langmuir–Blodgett deposition, **159**, 231
Contacts
Au–Ge/In ohmic contacts to n-type GaAs, **165**, 77
the effectiveness of chromium and TiW as diffusion barriers for AuZn/Au contacts in InP junction field effect transistors, **162**, 161
investigation of sliding contact resistance of Ni–Cr/Au and Ni–Cr/Au–SiO_2 thin resistive films, **164**, 129
metal film barriers against the evaporation of volatile components during the heat treatment of metal–compound semiconductor contacts, **164**, 1
new models for ohmic contacts to GaAs, **164**, 435
treatment of WTi contacts on silicon with low energy argon ions, **164**, 493
Copper
characterization of p-$CuInSe_2$ films for photovoltaics grown by a chemical deposition technique, **164**, 269
$CuInSe_2$ films for photovoltaics and photoelectrochemistry, **163**, 167
determination of $CuInSe_2$ thin film compositions by controlled-potential coulometry, **155**, 317
the effect of In_2O_3 on the electrical and struc-

tural properties of $CuInSe_2$ prepared by chemical spray pyrolysis, **159**, L53
the effects of temperature and bias illumination on the spectral sensitivity of CdS–Cu_xS heterojunctions, **164**, 313
electrodeposition of $CuInSe_2$ films from a sulphate bath, **157**, 159
exciton diffusion in thin Cu_2O films, **164**, 289
formation and conductivity of lipid-free multilayer systems of copper phthalocyanine, **159**, 239
grain boundary diffusion in Ni–Cu multilayer films, **162**, 155
the interaction of copper and nickel: nickel monolayers on a Cu{100} single crystal, **156**, 65
morphology and structure of gold, silver and copper layers obtained by sputtering during ion bombardment of targets from these metals, **157**, 315
new Langmuir–Blodgett films built up from a copper halogenide semiamphiphilic salt, **156**, L27
photovoltaic study of anodically grown oxide films on Ag–Cu alloys, **161**, 207
potentiostatic electrodeposition of cuprous oxide, **157**, 87
quantitative interface roughness studies of copper oxide on copper, **164**, 5
quaternary equilibrium phase diagram for copper, indium, selenium and oxygen, **158**, 133
screen-printed superconducting films of Y–Ba–Cu–O, **158**, L45
structural and electrical properties of screen-printed thick films of $YBa_2Cu_3O_{7-x}$ superconductors, **164**, 115
structure and properties of strained compositionally modulated Cu–Ni and Pd–Ni films, **163**, 491
superconductivity behaviour in screen-printed $YBa_2Cu_3O_7$ films, **164**, 119
thin film interaction of aluminium and hafnium: influence of copper and silicon, **161**, 235
thin film solid state cells using $Rb_4Cu_{16}I_7Cl_{13}$ electrolyte and their limitations, **164**, 345
time variation of the interisland spacing at liquid nitrogen temperature for copper and silver island films, **159**, L61
a work function study of the initial epitaxial growth and stability of thin copper layers on Pd(111), **163**, 447

Cordierite
synthesis and characterization of cordierite-based ceramic thin films, **162**, 315

Coulometry
determination of $CuInSe_2$ thin film compositions by controlled-potential coulometry, **155**, 317

Couples
kinetics and mechanism of reaction at room temperature in thin Au/metal couples, **156**, 105

Crystallinity
characterization of microcrystallinity in hydrogenated silicon thin films, **155**, 227

Crystallization
interdependence between crystallization and polymerization in diacetylene monolayers, **159**, 63
study of crystallization in amorphous tellurium films using resistivity measurements, **156**, 345

Cyanine
aggregation of cyanine dyes at Langmuir–Blodgett monolayers, **160**, 257
the crystalline structure of two-dimensional cyanine dye single crystals as revealed by electron diffraction, **160**, 251
microstructure and optical properties of mixed monolayers containing a J-band forming cyanine dye and various cosurfactants, **159**, 379
the spectroscopic behaviour of J-aggregates of cyanine dyes without long chains incorporated in the monolayer assemblies, **160**, 303

Cyclodextrins
Langmuir–Blodgett films of amphiphilic cyclodextrins, **159**, 353
photoisomerization of the azobenzenes included in Langmuir–Blodgett films of cyclodextrins, **160**, 33

D

Dangling bonds
stability of dangling bonds in amorphous hydrogenated silicon, **164**, 239

Davydov splitting
vibrational Davydov splitting in 7-(2-anthryl)-1-heptanoic acid Langmuir–Blodgett films, **159**, 331

Defects
defect model in thin dielectric films, **164**, 195
field-assisted ion exchange for the detection of localized defects in thin films on glass substrates, **161**, 85
positron lifetime study of vacancy defects in non-stoichiometric TiN_x and TiC_x films, **163**, 49

Densification
densification of aluminium fluoride thin films by

ion-assisted deposition, **159**, L57
effect of densification temperature on the Fourier transform IR analysis of borophosphosilicate glass films, **164**, 461
Density of states
density of states in a-Si:H, Cl determined by space-charge-limited currents, **158**, 217
experimental electronic density of states of tin selenide measured on thin films, **164**, 69
Deposition rate
the effects of deposition variables on deposition rate in the chemical vapour deposition of silicon nitride, **155**, 87
Depth profiles
depth profile measurements of aluminium film on phosphorus-doped hydrogenated amorphous silicon layers by Auger electron spectroscopy, **155**, 325
determination of the depth–concentration profile of the transition layer in $Ga_{1-x}Al_x$/GaAs heterostructures by X-ray photoelectron spectroscopy, **155**, 285
a study of annealing effects on deep level profile distributions in GaAs by capacitive methods, **162**, 13
topographical features of N^{2+}-sputtered metal sandwiches: their correlation with Auger depth resolution, **165**, 193
Depth profiling
a comparative Rutherford backscattering spectrometry and Auger electron spectroscopy depth profile study of Fe–N films, **161**, L69
the depth profile of the elements in lead chalcogenide layers, **161**, 281
Desorption
isothermal desorption study of organic molecules in Langmuir–Blodgett films using attenuated total reflection, **156**, L17
Deuterium retention
the effect of stoichiometry on sputtering, deuterium retention and surface damage in titanium carbide films, **156**, 231
Diacetylene
bleaching of exciton transition in Langmuir–Blodgett films of polydiacetylene, **160**, 373
interdependence between crystallization and polymerization in diacetylene monolayers, **159**, 63
optical properties of Langmuir–Blodgett polydiacetylene thin films, **160**, 327
Diamond
electrical conducting in thin film diamond, **164**, 187
investigations of r.f.-plasma-deposited diamond-like carbon coatings, **164**, 103
Diborane
effect of mixing oxygen or diborane on the formation of amorphous carbon films from methane by r.f. plasma chemical vapour deposition, **163**, 229
Dielectric properties
defect model in thin dielectric film, **164**, 195
dielectric relaxation in Co–Al_2O_3 composite films, **165**, 67
hydrated polar groups in lipid monolayers: effective local dipole moments and dielectric properties, **159**, 73
optical properties and dielectric function of manganese telluride thin films, **157**, 1
polymer–ceramic composite materials with high dielectric constants, **158**, 93
Diffraction
synchroton diffraction studies of lead octadecanoate, tetracosanoic acid and 1-eicosanol monolayers on water, **159**, 111
Diffusion
a comparative study of thin film diffusion measurements in metallic glasses by Rutherford backscattering spectrometry and Auger electron spectroscopy, **164**, 33
cosputtered $W_{75}C_{25}$ thin film diffusion barriers, **158**, 45
effect of a temperature gradient on arsenic diffusion in silicon, **157**, 49
the effectiveness of chromium and TiW as diffusion barriers for AuZn/Au contacts in InP junction field effect transistors, **162**, 161
exciton diffusion in thin Cu_2O films, **164**, 289
failure mechanisms of TiN thin film diffusion barriers, **164**, 417
implantation damage control of silicon indiffusion during rapid thermal annealing of InP using AlN/Si_3N_4 as an encapsulant, **162**, 49
Diodes
high pressure oxidation of Si(100) for production of ultrathin oxide metal/insulator/semiconductor diodes, **156**, 243
Dip technique
preparation and study of sulphide thin films deposited by the dip technique, **155**, 309
Dipole moments
dipole–dipole interaction in the diffused interlayer of magnetic superlattices, **161**, L83
hydrated polar groups in lipid monolayers: effective local dipole moments and dielectric properties, **159**, 73
Discontinuous films
effects of a silicon substrate on surface plasmon spectra in silver island films, **155**, L1

electroluminescence spectra of discontinuous conducting films, **165**, 49
the field effect of the electrical conductance of discontinuous thin metal films, **164**, 183
orientational effects in adsorption
IV: application of the van der Waals theory to the description of submonolayer films of linear molecules on solid surfaces, **161**, 367
the temperature dependence of electron emission from a discontinuous carbon film device between silver film electrodes, **158**, 207
time variation of the interisland spacing at liquid nitrogen temperature for copper and silver island films, **159**, L61
Dislocations
dislocations in epitaxial $Cd_{0.9}Mn_{0.1}Te$ films, **159**, L65
Disorder
Raman scattering analysis of disorder in heterogeneous $(GaAs)_{1-x}(SiC_2{:}H)_x$ films grown by metal–organic chemical vapour deposition, **155**, 331
Domains
electric-field-induced domain movement in phospholipid monolayers, **159**, 125
Donors
electron transfer quenching of excited pyrene or Ru(II)(bpy)$^+$ derivatives in Langmuir–Blodgett films by donor or acceptor molecules with different redox potentials, **160**, 317
molecular photodiodes consisting of unidirectionally oriented amphipathic acceptor–sensitizer–donor triads, **160**, 125
Doping
exposure characteristics of electron-beam-induced silver doping and its application to grating device fabrication in chalcogenide glass films, **165**, 55
Double-layer films
electrical conductance and temperature coefficient of resistivity of double-layer films, **158**, 13
Dyes
aggregation of cyanine dyes at Langmuir–Blodgett monolayers, **160**, 257
characterization of in-plane and out-of-plane molecular orientation in Langmuir–Blodgett films of merocyanine dyes using electron spin resonance, **159**, 285
a comparision of second harmonic generation and electro-optic studies of Langmuir–Blodgett monolayers of new hemicyanine dyes, **156**, 39
the crystalline structure of two-dimensional cyanine dye single crystals as revealed by electron diffraction, **160**, 251
electrical properties of pure, doped and sensitized organic dye films, **164**, 249
energy transfer between J-aggregated dye monolayers, **160**, 241
energy transfer between fluorescent dyes spaced by multilayers of cadmium salts of fatty acids, **160**, 347
fluorescent dye monolayers on oxidized silicon, **160**, 341
Langmuir–Blodgett films of non-centrosymmetric azobenzene dyes for non-linear optical applications, **160**, 363
linear electro-optic properties of Langmuir–Blodgett multilayers of an organic azo dye, **160**, 399
microstructure and optical properties of mixed monolayers containing a J-band forming cyanine dye and various cosurfactants, **159**, 379
multipiled monolayer assembly of J-aggregates of squarylium dye with short alkyl chains, **159**, 337
photothermal spectroscopy of dye-monolayer assemblies on solid substrates, **160**, 333
the spontaneous formation of J-like aggregate in Langmuir–Blodgett films of a squarylium dye, **160**, 299
the spectroscopic behaviour of J-aggregates of cyanine dyes without long chains incorporated in the monolayer assemblies, **160**, 303
thermochromic Langmuir–Blodgett films of a novel amphiphilic azo dye with homogeneous chromophore orientation, **160**, 407
third-order hyperpolarizability of centrosymmetric Langmuir–Blodgett films of stilbazolium dyes, **160**, 209
Dynamics
structure and dynamics in a Langmuir–Blodgett film at elevated temperatures, **159**, 359
structure and dynamics of deposited lipid monolayers: low energy electron diffraction and scattering of thermal energy helium atoms, **159**, 429
Dysprosium
time domain responses of the $Al/Dy_2O_3/Al$ thin film capacitors and their a.c. characteristics, **157**, 13

E

Electric fields
electric field mapping in conducting Langmuir–Blodgett films, **159**, 413

electric-field-assisted deposition of optical coatings, **156**, 153
electric-field-induced domain movement in phospholipid monolayers, **159**, 125
Electrical cells
Al–PbO–Ag as a solid electrolyte cell, **155**, 31
Electrical conductance
the field effect of the electrical conductance of discontinuous thin metal films, **164**, 183
Electrical conduction
conduction processes in inhomogeneous $CdSe_xTe_{1-x}$ semiconductors, **158**, 25
electrical conductance and temperature coefficient of resistivity of double-layer films, **158**, 13
electrical conduction in thin film diamond, **164**, 187
Electrical conductivity
d.c. conductivity of highly disordered NiCr–O thin films, **164**, 455
formation and conductivity of lipid-free multilayer systems of copper phthalocyanine, **159**, 239
an investigation of conductivity in metal-substituted phthalocyanine Langmuir–Blodgett films, **155**, 1
the scattering of electrons on the grain boundaries: electric conductivity, **161**, 1
Electrical properties
comparison of the electrical properties of polyimide films containing surface metal oxide: cobalt oxide *vs.* tin oxide, **158**, 189
d.c. electrical properties of evaporated thin films of CdTe, **164**, 281
the effect of In_2O_3 on the electrical and structural properties of $CuInSe_2$ prepared by chemical spray pyrolysis, **159**, L53
effect of n^+-polycrystalline silicon rapid thermal annealing on the electrical properties of the gate oxide, **162**, 21
effects of substrate thermal expansion coefficient on the physical and electrical properties of thick film resistors, **162**, 7
the effects of thickness on the electrical conduction of thin poly(1-trimethylsylil-1-propyne) films, **165**, 337
electrical characteristics of ion-beam-synthesized aluminium oxide layers, **163**, 317
electrical characteristics of PtSi formed by incoherent light annealing, **164**, 487
electrical and IR studies of ion-beam-sputtered hydrogenated amorphous germanium (a-Ge:H) films, **163**, 343
electrical properties of ferroelectric thin film KNO_3 memory devices, **164**, 339
some electrical properties of the GaAs-anodic oxide interface on the basis of measurements of the capacitance–voltage and conductance–voltage characteristics of metal–oxide–semiconductor structures, **165**, 21
electrical properties of plasma-deposited fluorinated silicon nitride, **162**, 59
electrical properties of pure, doped and sensitized organic dye films, **164**, 249
electrical properties of thin films of In_2O_3 prepared by post-oxidation of evaporated metal, **157**, 181
electrical properties of Ti–Si–N thin cermet films deposited in a triode sputtering system with a hot cathode, **162**, 111
electrical properties of thulium oxide thin films, **164**, 175
electrical and structural properties of concentrated Cr(Al) thin films, **165**, 11
formation of InSe and GaSe deposited films and their electrical properties, **156**, 145
in situ electrical property measurements of metal/(plasma polysiloxane)/metal structures, **155**, 175
microstructural, optical and electrical studies of sputtered epitaxial CdTe films, **163**, 409
optical and electrical properties of deposited films of Si(phthalocyaninato) $(OH)_2$, **157**, 189
optical and electrical properties of semiconducting rhenium disilicide thin films, **162**, 29
regularities of growth and electrical properties in the plasma-enhanced deposition of silicon nitride, **157**, 337
structural and electrical studies of alternating layers of porphyrins and fatty acids, **160**, 99
structural and electrical properties of screen-printed thick films of $YBa_2Cu_3O_{7-x}$ superconductors, **164**, 115
structural, optical and electrical properties of evaporated and sputtered Au–Cr thin films, **165**, 29
variations in structural and electrical properties of magnetron-sputtered indium tin oxide films with deposition parameters, **162**, 119
Electrical resistance
a comparison of the median time to failure with temperature-ramp resistance analysis to characterize electromigration to determine electromigration kinetic parameters, **155**, 209
Electrical resistivity
effect of applied external magnetic field on the relationship between the arrangement of the substrate and the resistivity of aluminium-

doped ZnO thin films prepared by r.f. magnetron sputtering, **164**, 275
resistivity anisotropy of nickel films induced by oblique incidence sputter deposition, **164**, 165
study of crystallization in amorphous tellurium films using resistivity measurements, **156**, 345
Electro-optic properties
a comparison of second harmonic generation and electro-optic studies of Langmuir–Blodgett monolayers of new hemicyanine dyes, **156**, 39
linear electro-optic properties of Langmuir–Blodgett multilayers of an organic azo dye, **160**, 399
structure, optical and electro-optical properties of polycrystalline WO_3 and MoO_3 thin films prepared by chemical vapour deposition, **164**, 333
Electrochemistry
electrochemical method to evaluate the connected porosity in ceramic coatings, **156**, 315
non-conducting polyphenylene oxide electrogeneration on mild steel by different electrochemical methods, **162**, 209
preparation and electrochemical behaviour of some metal oxide films, **158**, 277
voltametric behaviour of anodic titanium oxide films close to the hydrogen evolution reaction, **162**, 353
Electrochromic films
electrochromic characteristics of La_2O_3–WO_3 thin films, **161**, 67
electrochromism in anodic WO_3 films
I: preparation and physicochemical properties of films in the virgin and coloured states, **161**, 35
electrochromism in anodic WO_3 films
II: optical and electrochromic properties of coloured "distorted" hexagonal films, **161**, 47
electrochromism in polycrystalline WO_3 thin films prepared by chemical vapour deposition at high temperature, **164**, 369
Electrode materials
conducting Langmuir–Blodgett films as electrode materials, **160**, 133
Electrodeposition
electrodeposition of $CuInSe_2$ films from a sulphate bath, **157**, 159
electrodeposition technique and properties of semiconducting cadmium chalcogenide thin films from aprotic electrolytes, **163**, 279
a novel electroplating technique for cadmium telluride films in non-aqueous medium, **164**, 255
potentiostatic electrodeposition of cuprous oxide, **157**, 87
Electrodes
the oxygen electrode reaction in acid solutions on RuO_2 electrodes prepared by the thermal decomposition method, **163**, 301
Electrointercalation
the temperature dependence of superlattice spots in electron diffraction patterns of thin layers of Ag_xTiS_2 formed by electrointercalation, **164**, 81
Electroluminescence
bi-stable photoconductive–electroluminescent type of light amplifier with optical feedback, **164**, 411
electroluminescence spectra of discontinuous conducting films, **165**, 49
kinetic properties and energy transfer in the electroluminescence of thin film cells based on ZnS:Mn, **161**, 59
low-voltage-driven a.c. thin film electroluminescent cell containing a ZnS:Mn film deposited by molecular beam epitaxy, **162**, 73
low voltage-driven ZnS:Mn thin film electroluminescent devices using insulating dielectric ceramic sheets, **164**, 363
Electrolytes
Al–PbO–Ag as a solid electrolyte cell, **155**, 31
electrodeposition technique and properties of semiconducting cadmium chalcogenide thin films from aprotic electrolytes, **163**, 279
kinetics of growth of anodic oxide film on niobium in aqueous electrolyte, **158**, 245
study of lead(II) chloride solid electrolyte thin film galvanic cells doped with alkali chlorides, **161**, 77
thin film solid state cells using $Rb_4Cu_{16}I_7Cl_{13}$ electrolyte and their limitations, **164**, 345
Electromechanical properties
electromechanical properties of thin VO_2 films on polyimide substrates, **158**, L49
Electromigration
a comparison of the median time to failure with temperature-ramp resistance analysis to characterize electromigration to determine electromigration kinetic parameters, **155**, 209
electromigration in thin solid films, **164**, 123
Electron beam evaporation
properties of polycrystalline silicon grown on insulating substrates by electron beam gun evaporation, **155**, 97
X-ray photoelectron spectroscopy of O 1s and Si 2p lines in films of SiO_x formed by electron beam evaporation, **157**, 351

Electron beams
rapid modification of thin films by a large-area electron beam, **163**, 349
Electron density
X-ray diffraction of Langmuir–Blodgett films: establishing a new method for the calculation of electron density distributions from a single set of intensity data, **159**, 451
Electron diffraction
characterization of thin iron phosphate films on cold-rolled steel surfaces by transmission electron microscopy and electron diffraction, **162**, 183
electron diffraction studies of Langmuir–Blodgett film structures with potential for optical applications, **160**, 491
structure and dynamics of deposited lipid monolayers: low energy electron diffraction and scattering of thermal energy helium atoms, **159**, 429
the temperature dependence of superlattice spots in electron diffraction patterns of thin layers of Ag_xTiS_2 formed by electrointercalation, **164**, 81
Electron emission
the temperature dependence of electron emission from a discontinuous carbon film device between silver film electrodes, **158**, 207
Electron energy loss
deep core level electron energy loss studies on a silicon surface using slow electron energy loss spectroscopy, **164**, 27
Electron hopping
determination of interlayer electron hop time in a Langmuir–Blodgett multilayer, **160**, 171
Electron irradiation
effect of electron irradiation on the growth of thin antimony layers deposited on collodion and on carbon in a vacuum of 10^{-4} Pa, **161**, 123
Electron microscopy
characterization of thin iron phosphate films on cold-rolled steel surfaces by transmission electron microscopy and electron diffraction, **162**, 183
a high resolution transmission electron microscopy study of ZrO_2–CaO films, **162**, 235
electron microscopy of TFOF1 Langmuir–Blodgett films, **159**, 479
Electron spin resonance
characterization of in-plane and out-of-plane molecular orientation in Langmuir–Blodgett films of merocyanine dyes using electron spin resonance, **159**, 285
electron spin resonance study of Langmuir–Blodgett films of *N*-docosylpyridinium-di(tetracyanoquinodimethane), **160**, 139
electron spin resonance studies on the superlattices PbTe–$Pb_{1-x}Eu_xTe$ prepared by hot wall epitaxy, **161**, 149
Electron transfer
electron transfer quenching of excited pyrene or Ru(II)$(bpy)^+$ derivatives in Langmuir–Blodgett films by donor or acceptor molecules with different redox potentials, **160**, 317
Electronic properties
a few electronic properties of thin films on plasma-polymerized acrylonitrile, **161**, 187
some new results on the electronic properties of a-Si and a-SiN_x, **163**, 85
Electronics
high temperature superconductors in electronics, **163**, 181
Electrons
film thickness and composition determination for binary alloys using backscattered electrons, **165**, 217
the scattering of electrons on the grain boundaries; electric conductivity, **161**, 1
Ellipsometers
accuracy of digital Fourier transformation detection systems for high speed rotating analyser ellipsometers, **155**, 151
Ellipsometry
application of spectroscopic ellipsometry to study the effect of surface treatments on cadmium telluride films, **164**, 265
characterization of thin films and materials used in semiconductor technology by spectroscopic ellipsometry, **164**, 43
ellipsometric comparisons of rare earth-transition metal alloy films in connection with magneto-optical recording, **162**, 89
IR ellipsometry study of oriented molecular monolayers, **156**, 295
spectroscopic ellipsometry of ultrathin films: from UV to IR, **163**, 157
study of microstructure of amorphous Ge–Se films using spectroscopic ellipsometry, **164**, 51
theory of light reflection from a substrate sparsely seeded with spheres: comparison with an ellipsometric experiment, **164**, 63
Emersion
measurements of the forces of emersion and immersion and contact angles during Langmuir–Blodgett deposition, **159**, 231
Encapsulation
effect of Si_3N_4 encapsulation on the thermal

processing of hydrogenated amorphous silicon, **161**, 181
implantation damage control of silicon indiffusion during rapid thermal annealing of InP using AlN/Si_3N_4 as an encapsulant, **162**, 49
Energy barriers
energy barrier height measurements of chemically vapour-deposited P_3N_5 films by internal photoinjection, **162**, 41
Energy transfer
energy transfer and aggregation in monolayers containing porphyrins and phthalocyanines, **159**, 115
energy transfer between J-aggregated dye monolayers, **160**, 241
energy transfer between fluorescent dyes spaced by multilayers of cadmium salts of fatty acids, **160**, 347
energy transfer to water-soluble anionic dyes absorbed on fluorophore-containing Langmuir–Blodgett films, **160**, 287
kinetic properties and energy transfer in the electroluminescence of thin film cells based on ZnS:Mn, **161**, 59
Entrainment
entrainment of aqueous subphase in Langmuir–Blodgett films, **159**, 191
Enzymes
enzyme-immobilized Langmuir–Blodgett films for a biosensor, **160**, 463
Epitaxy
doping of liquid phase epitaxial layers of InGaAsP with group IV elements, **163**, 421
effects of the buffer layer in metal–organic vapour phase epitaxy of GaN on sapphire substrate, **163**, 415
efficiencies of InAs transport and epitaxial growth by chemical vapour deposition in the system $InA–AsCl_3–H_2$, **161**, 257
electron spin resonance studies on the superlattices $PbTe–Pb_{1-x}Eu_xTe$ prepared by hot wall epitaxy, **161**, 149
epitaxial nucleation and growth kinetics of indium phosphide in an $In–PH_3–HC1–H_2$ system, **163**, 437
growth of $Pb_{0.82}Sn_{0.18}Te$ by molecular beam epitaxy, **161**, 171
high capability, quasi-closed growth system for isothermal vapour phase epitaxy of (Hg, Cd)Te, **161**, 157
low temperature liquid phase epitaxial growth and characterization of $Al_xGa_{1-x}As$, **163**, 443
low-voltage-driven a.c. thin film electroluminescent cell containing a ZnS:Mn film deposited by molecular beam epitaxy, **162**, 73
microstructural, optical and electrical studies of sputtered epitaxial CdTe films, **163**, 409
monolayer growth and direct writing of GaAs by pulsed laser metal–organic vapor phase epitaxy, **163**, 405
non-destructive determination of free-carrier density of epitaxial layers of GaSb by IR reflectivity measurement, **155**, 125
partial epitaxial growth of $NbSi_2$ on Si(111), **161**, 263
partial epitaxial growth of Ni_2Ge and NiGe on Ge(111), **162**, 287
properties of undoped and manganese-doped InGaAsP grown by liquid phase electroepitaxy, **163**, 427
transport properties of tellurium films prepared by hot wall epitaxy, **162**, 1
a work function study of the initial epitaxial growth and stability of thin copper layers on Pd(111), **163**, 447
Erosion
evaluation of the wet erosion resistance of sprayed coatings, **162**, 145
Europium
electron spin resonance studies on the superlattices $PbTe–Pb_{1-x}Eu_xTe$ prepared by hot wall epitaxy, **161**, 149
Evaporation
continuous recording of the evaporation rate of water through monolayers, **159**, 53
Excitons
bleaching of exciton transition in Langmuir–Blodgett films of polydiacetylene, **160**, 373
exciton diffusion in thin Cu_2O films, **164**, 289

F

Failure
failure mechanisms of TiN thin film diffusion barriers, **164**, 417
Faraday rotation
determination of thickness uniformity and magnetic bubble parameters for garnet thin films by Faraday rotation, **164**, 191
Fatty acids
aligned textures in multilayers of cadmium arachidate as seen by electron microscopy, **159**, 405
charge incorporation in ω-tricosenoic acid Langmuir–Blodgett multilayers, **160**, 177
energy transfer between fluorescent dyes spaced by multilayers of cadmium salts of fatty acids, **160**, 347
Fourier transform IR spectroscopy of proton-

ated cadmium arachidate layers in different positions of a perdeuterated multilayer, **159**, 443
Fourier transform IR studies of alternate layer acid–amine Langmuir–Blodgett films with pyroelectric properties, **159**, 461
medium angle X-ray scattering of Langmuir–Blodgett films of cadmium salts of fatty acids, **159**, 421
structural and electrical studies of alternating layers of porphyrins and fatty acids, **160**, 99
structure and temperature dependence of fatty acid Langmuir–Blodgett films studied by neutron and X-ray scattering, **159**, 253
surface pressure dependence of molecular tilt in Langmuir–Blodgett films of 22-tricosenoic acid, **161**, 325
surface properties of a long-chain 10:12 diynoic acid monolayer at air–liquid and solid–liquid interfaces, **155**, 255
synchroton diffraction studies of lead octadecanoate, tetracosanoic acid and 1-eicosanol monolayers on water, **159**, 111
vibrational Davydov splitting in 7-(2-anthryl)-1-heptanoic acid Langmuir–Blodgett films, **159**, 331
viscoelasticity of pentadecanoic acid monolayers, **159**, 159

Fermi level
Fermi level pinning and chemical interactions at metal/metal organic CVD grown GaAs interfaces: Schottky barrier height, **164**, 21

Ferrocenes
Langmuir–Blodgett films of long-chain derivatives of ferrocene, biferrocene and oxidized ferricenium, **160**, 153

Ferroelectric films
electrical properties of ferroelectric thin film KNO_3 memory devices, **164**, 339

Fiber optics
light bending and light confinement of isotopic boundaries—possibility of isotopic fiber optics, **158**, L37

Field effect
the field effect of the electrical conductance of discontinuous thin metal films, **164**, 183

Fluorescence
effects of molecular organization on photophysical and photochemical behaviour: quenching by subphase iodide of fluorescence in pyrene-bearing probes at the nitrogen–water interface, **159**, 133
energy transfer between fluorescent dyes spaced by multilayers of cadmium salts of fatty acids, **160**, 347
fluorescence anisotropy studies of orientational order of Langmuir–Blodgett multilayers, **159**, 101
fluorescent dye monolayers on oxidized silicon, **160**, 341
measurement of fluorescence depolarization for chlorophyll-a and chlorophyll-b in spread monolayers at the nitrogen–water interface, **159**, 149

Fluorine
characterization of SrF_2 thin films and of SrF_2/InP structures, **158**, 81
correlation between morphology, optical losses and laser damage of MgF_2–SiO_2 multilayers, **156**, 1
electrical properties of plasma-deposited fluorinated silicon nitride, **162**, 59
an interesting unconventional photoinduced change in the dark conductivity of a-Si:F:H, **164**, 217
the optical properties of YF_3 films, **155**, 17
solid lubricating fluorine-containing polymer film synthesized by perfluoropolyether sputtering, **158**, 51
structural properties of SnO_2:F films deposited by spray pyrolysis technique, **164**, 261

Fluorophor
an optical chemical sensor using a fluorophor-embedded Langmuir–Blodgett film, **160**, 477

Fluorophore
energy transfer to water-soluble anionic dyes absorbed on fluorophore-containing Langmuir–Blodgett films, **160**, 287

Fourier transformation
accuracy of digital Fourier transformation detection systems for high speed rotating analyser ellipsometers, **155**, 151

Free carriers
non-destructive determination of free-carrier density of epitaxial layers of GaSb by IR reflectivity measurement, **155**, 125

Frequency conversion
compositionally graded $Al_xGa_{1-x}As$ films for millimetre wave frequency conversion, **163**, 479

G

Gadolinium
intermixing of Co/Gd_xO_y thin films on kapton polyimide, **157**, 223

Gallium
annealing behaviour of extremely low energy beryllium implantation into $Ga_{0.4}$–$In_{0.53}As$, **156**, 239

Au–Ge/In ohmic contacts to n-type GaAs, **165**, 77
characterization of heteroepitaxial InSb films on GaAs prepared by metal–organic magnetron sputtering, **163**, 399
compositionally graded $Al_xGa_{1-x}As$ films for millimetre wave frequency conversion, **163**, 479
determination of the depth–concentration profile of the transition layer in $Ga_{1-x}Al_x/GaAs$ heterostructures by X-ray photoelectron spectroscopy, **155**, 285
doping of liquid phase epitaxial layers of InGaAsP with group IV elements, **163**, 421
effects of the buffer layer in metalorganic vapour phase epitaxy of GaN on sapphire substrate, **163**, 415
Fermi level pinning and chemical interactions at metal/metal organic CVD grown GaAs interfaces: Schottky barrier height, **164**, 21
formation of InSe and GaSe deposited films and their electrical properties, **156**, 145
long-time air oxidation and oxide–substrate reactions on GaSb, GaAs and GaP at room temperature studied by X-ray photoelectron spectroscopy, **156**, 127
low temperature liquid phase epitaxial growth and characterization of $Al_xGa_{1-x}As$, **163**, 443
molecular beam epitaxy of AlAs/GaAs heterostructures and superlattices, **163**, 1
monolayer growth and direct writing of GaAs by pulsed laser metal–organic vapour phase epitaxy, **163**, 405
new models for ohmic contacts to GaAs, **164**, 435
non-destructive determination of free-carrier density of epitaxial layers of GaSb by IR reflectivity measurement, **155**, 125
optical properties of sputtered AlN films and coated GaAs, **158**, L39
optical properties of the thermal oxide–GaAs rough interface, **155**, 217
properties of undoped and manganese-doped InGaAsP grown by liquid phase electroepitaxy, **163**, 427
Raman scattering analysis of disorder in heterogeneous $(GaAs)_{1-x}(SiC_2{:}H)_x$ films grown by metal–organic chemical vapour deposition, **155**, 331
some electrical properties of the GaAs–anodic oxide interface on the basis of measurements of the capacitance–voltage and conductance–voltage characteristics of metal–oxide–semiconductor structures, **165**, 21
a study of annealing effects on deep level profile distributions in GaAs by capacitive methods, **162**, 13
study of the growth mechanism of modulated structures in the InAs–GaAs system, **163**, 497
study of thermodynamic processes in the hot wall reactor for the growth of high quality CdTe on GaAs, **163**, 241
superlattice $ZnS_xSe_{1-x}/ZnS_ySe_{1-y}$ on (100) GaAs obtained by a photoassistant metal–organic chemical vapour deposition method, **163**, 475

Galvanic cells
study of lead(II) chloride solid electrolyte thin film galvanic cells doped with alkali chlorides, **161**, 77

Garnets
determination of thickness uniformity and magnetic bubble parameters for garnet thin films by Faraday rotation, **164**, 191

Gas additives
thermodynamic investigation of selective tungsten chemical vapour deposition: influence of growth conditions and gas additives on the selectivity in the fluoride process, **158**, 107

Gas effects
surface plasmon resonance studies of gas effects in phthalocyanine Langmuir–Blodgett films, **160**, 431
theoretical description of gas–film interaction on SnO_x, **163**, 189

Germanium
Au–Ge/In ohmic contacts to n-type GaAs, **165**, 77
deposition mechanism of hydrogenated amorphous Si-Ge films, **163**, 123
electrical and IR studies of ion-beam-sputtered hydrogenated amorphous germanium (a-Ge:H) films, **163**, 343
interfacial reactions of palladium thin films on Ge(111) and Ge(001), **162**, 295
ion channeling analysis of MBE grown $Si_{1-x}Ge_x/Si$ strained layer superlattices, **163**, 455
partial epitaxial growth of Ni_2Ge and NiGe on Ge(111), **162**, 287
study of microstructure of amorphous Ge–Se films using spectroscopic ellipsometry, **164**, 51
thermally stimulated currents in thin amorphous Ge–Se films, **155**, L5

Glass
effect of densification temperature on the Fourier transform IR analysis of borophosphosilicate glass films, **164**, 461

exposure characteristics of electron-beam-induced silver doping and its application to grating device fabrication in chalcogenide glass films, **165**, 55
field-assisted ion exchange for the detection of localized defects in thin films on glass substrates, **161**, 85
formation of texture in vacuum-condensed tin on glass, **161**, 213
quantitative X-ray fluorescence analysis of boron in thin films of borophosphosilicate glasses, **157**, 325
a study of the properties of the low temperature chemically vapour-deposited phosphosilicate glass films, **161**, L71
Glow discharge
characterization of microcrystalline silicon films prepared by the glow discharge method under different conditions, **156**, 277
deposition of hard carbon films by the r.f. glow discharge method, **158**, 233
non-uniform heating effects during treatment in a glow discharge, **156**, 337
Glycerol
two-step transfer of conducting Langmuir films from a glycerol subphase, **159**, 207
Gold
Au–Ge/In ohmic contacts to n-type GaAs, **165**, 77
effects of heat treating Au/Ni thin film composites in various ambients, **162**, 247
the initial nucleation and growth of gold on sodium chloride for substrate temperatures between 123 and 448 K, **155**, 267
investigation of sliding contact resistance of Ni–Cr/Au and Ni–Cr/Au–SiO_2 thin resistive films, **164**, 129
an investigation of thin gold films deposited by ionized cluster beams, **163**, 337
kinetics and mechanism of reaction at room temperature in thin Au/metal couples, **156**, 105
morphology and structure of gold, silver and copper layers obtained by sputtering during ion bombardment of targets from these metals, **157**, 315
reflectometry measurement of optical parameters of $Au/SiO_2/Si$ films, **156**, 11
structural, optical and electrical properties of evaporated and sputtered Au–Cr thin films, **165**, 29
Grain boundaries
grain boundary diffusion in Ni–Cu multilayer films, **162**, 155
the scattering of electrons on the grain boundaries: electric conductivity, **161**, 1
Grating devices
exposure characteristics of electron-beam-induced silver doping and its application to grating device fabrication in chalcogenide glass films, **165**, 55
Growth
amorphous PbSe films: growth and properties, **165**, 303
epitaxial nucleation and growth kinetics of indium phosphide in an In–PH_3–HCl–H_2 system, **163**, 437
growth of Al–Mn quasicrystals by vacuum deposition, **163**, 61
growth and properties of glow-discharge hydrogenated amorphous silicon–carbon alloys from silane–propane mixtures, **164**, 221
growth processes in amorphous metallic films: a computer simulation, **158**, 299
growth and characterization of indium telluride thin films, **157**, 345
growth kinetics of thin anodic oxides of silicon and its dependence on phosphorus concentration in silicon, **163**, 373
the initial nucleation and growth of gold on sodium chloride for substrate temperatures between 123 and 448 K, **155**, 267
kinetics of grain growth in doped polycrystalline silicon thin films, **163**, 383
kinetics of growth of anodic oxide film on niobium in aqueous electrolyte, **158**, 245
low temperature growth of AlN and Al_2O_3 films by the simultaneous use of a microwave ion source and an ionized cluster beam system, **157**, 143
low temperature growth of pyrolytic carbon with well-ordered graphite structure by chemical vapour deposition, **162**, 273
partial epitaxial growth of Ni_2Ge and NiGe on Ge(111), **162**, 287
regularities of growth and electrical properties in the plasma-enhanced deposition of silicon nitride, **157**, 337
study of the growth mechanism of modulated structures in the InAs–GaAs system, **163**, 497
thermodynamic investigation of selective tungsten chemical vapour deposition: influence of growth conditions and gas additives on the selectivity in the fluoride process, **158**, 107

H

Hafnium
thin film interaction of aluminium and hafnium: influence of copper and silicon, **161**, 235

variations in the reflectance of TiN, ZrN and HfN, **157**, 255
Halides
densification of aluminium fluoride thin films by ion-assisted deposition, **159**, L57
f.c.c. niobium films grown by halide chemical vapour deposition on ultrasound-vibrating substrates, **158**, 123
the initial nucleation and growth of gold on sodium chloride for substrate temperatures between 123 and 448 K, **155**, 267
new Langmuir–Blodgett films built up from a copper halogenide semiamphiphilic salt, **156**, L27
preparation and characterization of Langmuir–Blodgett films of mesoporphyrin IX dimethylester indium chloride, **157**, 69
spray deposition of $TbCl_3$-doped In_2O_3 photoluminescent films, **165**, 249
study of lead(II) chloride solid electrolyte thin film galvanic cells doped with alkali chlorides, **161**, 77
Hall effect
hall effect in conducting Langmuir–Blodgett films of a ternary tetracyanoquinodimethane salt, **161**, L73
Hard coatings
correlation of process and system parameters with structure and properties of physically vapour-deposited hard coatings, **157**, 195
Hardness
characterization and microhardness measurement of electron-beam-evaporated alumina coatings, **165**, 163
characterizing the hardness and modulus of thin films using a mechanical properties microprobe, **161**, 117
Heat treatment
metal film barriers against the evaporation of volatile components during the heat treatment of metal–compound semiconductor contacts, **164**, 1
Heating
non-uniform heating effects during treatment in a glow discharge, **156**, 337
Heterojunctions
the effects of temperature and bias illumination on the spectral sensitivity of CdS–Cu_xS heterojunctions, **164**, 313
photovoltaic properties of ZnO/p-CdTe thin film heterojunctions, **164**, 295
rapid thermal annealing of arsenic–phosphorus (n^+–n^-) double-diffused shallow junctions, **161**, 131
studies of some properties of mechanical stress in a-Si:H, a-SiN_x:H and a-Si:H/a-SiN:H heterojunction films, **165**, 173
Heterostructures
determination of the depth–concentration profile of the transition layer in $Ga_{1-x}Al_x$/GaAs heterostructures by X-ray photoelectron spectroscopy, **155**, 285
formation of organic heterostructures into p–n heterojunctions by surface pressure control, **160**, 165
physical properties of II–VI binary and multicomponent compound films and heterostructures fabricated by chemical vapour deposition, **164**, 301
Hillocks
ion beam suppression of hillock growth in aluminium thin films, **156**, 173
Hot wall reactor
study of thermodynamic processes in the hot wall reactor for the growth of high quality CdTe on GaAs, **163**, 241
Hydrogen
characterization of microcrystallinity in hydrogenated silicon thin films, **155**, 227
density of states in a-Si:H,Cl determined by space-charge-limited currents, **158**, 217
deposition mechanism of hydrogenated amorphous Si–Ge films, **163**, 123
deposition of Si_xC_{1-x}:H films by reactive r.f. sputtering, **155**, 39
depth profile measurements of aluminium film on phosphorus-doped hydrogenated amorphous silicon layers by Auger electron spectroscopy, **155**, 325
direct UV photoenhanced chemical vapour deposition of a-Si:H from disilane using a deuterium lamp, **163**, 237
electrical and IR studies of ion-beam-sputtered hydrogenated amorphous germanium (a-Ge:H) films, **163**, 343
growth and properties of glow-discharge hydrogenated amorphous silicon–carbon alloys from silane–propane mixtures, **164**, 221
hydrogenated amorphous Si–C alloy prepared by chemical vapour deposition, **164**, 213
an interesting unconventional photoinduced change in the dark conductivity of a-Si:F:H, **164**, 217
IR spectroscopy of a-$Si_{1-x}Sn_x$:H films, **164**, 243
IR transmittance studies of hydrogen-free and hydrogenated silicon nitride and silicon oxynitride films deposited by reactive sputtering, **155**, 301
light-induced changes in magnetron-sputtered

hydrogenated amorphous silicon films, **164**, 227
optical absorption and hydrogen content of plasma-deposited carbon films, **157**, 29
photoelectrical properties of H^+-implanted CdS thin films, **156**, L21
plasma deposition of amorphous hydrogenated carbon films on III–V semiconductors, **157**, 97
properties of selective low pressure chemically vapour deposited tungsten films produced by hydrogen reduction in a cold wall system, **164**, 501
stability of dangling bonds in amorphous hydrogenated silicon, **164**, 239
stress effect in junctions of n-type microcrystalline Si:H with p-type silicon, **164**, 321
studies of some properties of mechanical stress in a-Si:H, a-SiN_x:H and a-Si:H/a-SiN_x:H heterojunction films, **165**, 173
study of sputtered ZnO–Pd thin films as solid state H_2 and NH_3 gas sensors, **157**, 169
voltametric behaviour of anodic titanium oxide films close to the hydrogen evolution reaction, **162**, 353
Hyperpolarizability
third-order hyperpolarizability of centrosymmetric Langmuir–Blodgett films of stilbazolium dyes, **160**, 209

I

Illumination
the effects of temperature and bias illumination on the spectral sensitivity of CdS–Cu_xS heterojunctions, **164**, 313
Image intensifiers
fabrication and characterization of solid state image intensifier panels, **164**, 357
Immersion
measurements of the forces of emersion and immersion and contact angles during Langmuir–Blodgett deposition, **159**, 231
Indentation
the scratch adhesion test: an elastic–plastic indentation analysis, **157**, 233
Indium
annealing behaviour of extremely low energy beryllium implantation into $Ga_{0.4}$–$In_{0.53}As$, **156**, 239
characterization of SrF_2 thin films and of SrF_2/InP structures, **158**, 81
characterization of p-$CuInSe_2$ films for photovoltaics grown by a chemical deposition technique, **164**, 269
characterization of heteroepitaxial InSb films on GaAs prepared by metal–organic magnetron sputtering, **163**, 399
chemical composition of native sulphides formed on InP by indirect plasma, **162**, 223
$CuInSe_2$ films for photovoltaics and photoelectrochemistry, **163**, 167
determination of $CuInSe_2$ thin film compositions by controlled-potential coulometry, **155**, 317
doping of liquid phase epitaxial layers of InGaAsP with group IV elements, **163**, 421
the effect of In_2O_3 on the electrical and structural properties of $CuInSe_2$ prepared by chemical spray pyrolysis, **159**, L53
effects of oxygen partial pressure on the properties of reactively evaporated thin films of indium oxide, **156**, 161
efficiencies of InAs transport and epitaxial growth by chemical vapour deposition in the system InA–$AsCl_3$–H_2, **161**, 257
electrical properties of thin films of In_2O_3 prepared by post-oxidation of evaporated metal, **157**, 181
electrodeposition of $CuInSe_2$ films from a sulphate bath, **157**, 159
epitaxial nucleation and growth kinetics of indium phosphide in an In–PH_3–HCl–H_2 system, **163**, 437
formation of InSe and GaSe deposited films and their electrical properties, **156**, 145
formation of stoichiometric InSe compound films, **164**, 207
growth and characterization of indium telluride thin films, **157**, 345
indium tin oxide films from metal–organic precursors, **161**, 273
optical properties of native oxides on InP, **162**, 81
photoconductivity studies of indium/epindolidione/indium tin oxide sandwich cells, **158**, 175
preparation and characterization of Langmuir–Blodgett films of mesoporphyrin IX dimethylester indium chloride, **157**, 69
preparation of indium tin oxide films by vacuum evaporation, **162**, 305
properties of undoped and manganese-doped InGaAsP grown by liquid phase electroepitaxy, **163**, 427
quaternary equilibrium phase diagram for copper, indium, selenium and oxygen, **158**, 133
study of the growth mechanism of modulated structures in the InAs-GaAs system, **163**, 497

thermoelectric power of indium tin oxide films, **157**, 7
variations in structural and electrical properties of magnetron-sputtered indium tin oxide films with deposition parameters, **162**, 119
Inert gas
inert gas entrapment in films produced by ion-assisted physical vapour deposition processes, **156**, 265
Integrated optics
polyurethane coatings for integrated optics applications, **161**, L79
Interaction potential
equilibrium interaction potential and height of an argon adatom on an Ar(001) crystal surface, **158**, 151
Interfaces
direct characterization of monolayers at the air–water interface, **159**, 1
effects of molecular organization on photophysical and photochemical behaviour: quenching by subphase iodide of fluorescence in pyrene-bearing probes at the nitrogen-water interface, **159**, 133
Fermi level pinning and chemical interactions at metal/metal organic CVD grown GaAs interfaces: Schottky barrier height, **164**, 21
interfacial reactions in bimetallic Ag–Sn thin film couples, **155**, 243
measurement of fluorescence depolarization for chlorophyll-a and chlorophyll-b in spread monolayers at the nitrogen–water interface, **159**, 149
optical properties of the thermal oxide–GaAs rough interface, **155**, 217
quantitative interface roughness studies of copper oxide on copper, **164**, 5
surface properties of a long-chain 10:12 diynoic acid monolayer at air–liquid and solid–liquid interfaces, **155**, 255
synthesis of electrically conductive polypyrroles at the air–water interface of a Langmuir–Blodgett film balance, **160**, 187
time-resolved study of thin nickel silicide layer growth at the nickel film–Si(100) interface, **164**, 481
an X-ray scattering study of lipid monolayers at the air-water interface and on solid supports, **159**, 17
Interlayers
dipole–dipole interaction in the diffused interlayer of magnetic superlattices, **161**, L83
Intermolecular interactions
structural studies of intermolecular interactions in pure and diluted films of a redox-active phthalocyanine, **159**, 83
Iodine
thin film solid state cells using $Rb_4Cu_{16}I_7Cl_{13}$ electrolyte and their limitations, **164**, 345
Ion beams
an investigation of thin gold films deposited by ionized cluster beams, **163**, 337
effect of mixing ions on the formation process of β-SiC fabricated by ion beam mixing, **157**, 117
electrical characteristics of ion-beam-synthesized aluminium oxide layers, **163**, 317
inert gas entrapment in films produced by ion-assisted physical vapour deposition processes, **156**, 265
densification of aluminium fluoride thin films by ion-assisted deposition, **159**, L57
ion beam mixing of silver–magnesium oxide multilayers, **165**, 347
ion beam sputter deposition of low loss Al_2O_3 films for integrated optics, **165**, 1
ion beam suppression of hillock growth in aluminium thin films, **156**, 173
low temperature growth of AlN and Al_2O_3 films by the simultaneous use of a microwave ion source and an ionized cluster beam system, **157**, 143
molybdenum disilicide formation by ion beam mixing and rapid thermal annealing of Mo/Si(111), **164**, 449
pulsed-laser-induced and ion-beam-induced surface synthesis and modification of oxides, nitrides and carbides, **163**, 215
selective deposition of thin films by substrate argon ion bombardment, **164**, 475
a thermal spike analysis of low energy ion-activated surface processes, **165**, 359
treatment of WTi contacts on silicon with low energy argon ions, **164**, 493
Ion bombardment
change in water vapour adsorption kinetics in chemically vapour-deposited SiO_2 films after ion irradiation, **161**, 343
a choice of the optimum density of ion bombardment by ion-assisted physical vapour deposition of films, **161**, 249
Ion channeling
ion channeling analysis of MBE grown $Si_{1-x}Ge_x$/Si strained layer superlattices, **163**, 455
Ion exchange
field-assisted ion exchange for the detection of localized defects in thin films on glass substrates, **161**, 85

Ion implantation
annealing behaviour of extremely low energy beryllium implantation into $Ga_{0.4}$–$In_{0.53}As$, **156**, 239
high-dose carbon ion implantation studies in silicon, **163**, 323
implantation damage control of silicon indiffusion during rapid thermal annealing of InP using AlN/Si_3N_4 as an encapsulant, **162**, 49
modelling of ^{18}O tracer studies of the oxygen redistribution during formation of SiO_2 layers by high dose implantation, **161**, 333
Ion plating
effects of process parameters on the ionization in triode ion plating, **155**, 143
Ion scattering spectroscopy
study of surface segregation of simultaneously evaporated Mn–Ag alloy films by means of ion scattering spectroscopy and Auger electron spectroscopy, **164**, 37
Ionization
effects of process parameters on the ionization in triode ion plating, **155**, 143
Ionophores
the deposition and characterization of multilayers of the ionophore valinomycin, **160**, 483
IR studies
application of X-ray photoelectron spectroscopy and Fourier transform IR reflection absorption spectroscopy to studies of the composition of Langmuir–Blodgett films, **159**, 267
effect of densification temperature on the Fourier transform IR analysis of borophosphosilicate glass films, **164**, 461
electrical and IR studies of ion beam sputtered hydrogenated amorphous germanium (a-Ge:H) films, **163**, 343
Fourier transform IR spectroscopy of protonated cadmium arachidate layers in different positions of a perdeuterated multilayer, **159**, 443
Fourier transform IR studies of alternate layer acid–amine Langmuir–Blodgett films with pyroelectric properties, **159**, 461
IR ellipsometry study of oriented molecular monolayers, **156**, 295
IR response of phthalocyanine thin films to nitrogen dioxide, **165**, 83
IR spectroscopy of a-$Si_{1-x}Sn_x$:H films, **164**, 243
IR studies of pyroelectric Langmuir–Blodgett films, **155**, 187
IR transmittance studies of hydrogen-free and hydrogenated silicon nitride and silicon oxynitride films deposited by reactive sputtering, **155**, 301
non-destructive determination of free-carrier density of epitaxial layers of GaSb by IR reflectivity measurement, **155**, 125
Iron
characterization of thin iron phosphate films on cold-rolled steel surfaces by transmission electron microscopy and electron diffraction, **162**, 183
columnar structure of obliquely deposited iron films prepared at low substrate temperatures, **158**, 239
columnar and textural structures in obliquely deposited iron films, **163**, 379
a comparative Rutherford backscattering spectrometry and Auger electron spectroscopy depth profile study of Fe–N films, **161**, 669
patterned photoassisted organometallic deposition of iron, nickel and palladium on silicon, **156**, L31
X-ray characterization of epitaxially grown dilute magnetic semiconductors $Zn_{1-x}Fe_xSe$ ($0 < x < 0.22$), **164**, 111

J

J-aggregates
energy transfer between J-aggregated dye monolayers, **160**, 241
Langmuir–Blodgett films of merocyanine J-aggregates: preparation and structural change on irradiation by laser light, **165**, 323
multipiled monolayer assembly of J-aggregates of squarylium dye with short alkyl chains, **159**, 337
the spectroscopic behaviour of J-aggregates of cyanine dyes without long chains incorporated in the monolayer assemblies, **160**, 303
the spontaneous formation of J-like aggregate in Langmuir–Blodgett films of a squarylium dye, **160**, 299
Junctions
See also heterojunctions
stress effect in junctions of n-type microcrystalline Si:H with p-type silicon, **164**, 321

K

Kinetics
change in water vapour adsorption kinetics in chemically vapour deposited SiO_2 films after ion irradiation, **161**, 343
a comparative study of silver photodoping in chalcogenide films by means of extended X-

ray absorption fine structure and kinetics measurements, **164**, 467
a comparison of the median time to failure with temperature-ramp resistance analysis to characterize electromigration to determine electromigration kinetic parameters, **155**, 209
epitaxial nucleation and growth kinetics of indium phosphide in an $In–PH_3–HCl–H_2$ system, **163**, 437
growth kinetics of thin anodic oxides of silicon and its dependence on phosphorus concentration in silicon, **163**, 373
kinetic aspects of thin film formation of ternary semiconductors, **163**, 297
kinetic properties and energy transfer in the electroluminescence of thin film cells based on ZnS:Mn, **161**, 59
kinetics of grain growth in doped polycrystalline silicon thin films, **163**, 383
kinetics of growth of anodic oxide film on niobium in aqueous electrolyte, **158**, 245
kinetics and mechanism of reaction at room temperature in thin Au/metal couples, **156**, 105

L

Langmuir–Blodgett films
aggregation of cyanine dyes at Langmuir–Blodgett monolayers, **160**, 257
aligned textures in multilayers of cadmium arachidate as seen by electron microscopy, **159**, 405
application of X-ray photoelectron spectroscopy and Fourier transform IR reflection absorption spectroscopy to studies of the composition of Langmuir–Blodgett films, **159**, 267
bleaching of exciton transition in Langmuir–Blodgett films of polydiacetylene, **160**, 373
the characterization of Langmuir–Blodgett films of a non-linear optical, side chain liquid crystalline polymer, **161**, 315
characterization methods for Langmuir–Blodgett films, **159**, 243
characterization of in-plane and out-of-plane molecular orientation in Langmuir–Blodgett films of merocyanine dyes using electron spin resonance, **159**, 285
characterization of monolayer and bilayer (polymer/monolayer) structures for their use as a lubricant, **160**, 453
charge incorporation in ω-tricosenoic acid Langmuir–Blodgett multilayers, **160**, 177
a comparison of second harmonic generation and electro-optic studies of Langmuir–Blodgett monolayers of new hemicyanine dyes, **156**, 39
conducting Langmuir–Blodgett films as electrode materials, **160**, 133
continuous recording of the evaporation rate of water through monolayers, **159**, 53
control of structure in Langmuir–Blodgett films of terphenyl liquid crystal compounds, **159**, 345
controls of photochromic reactions in spiropyran Langmuir–Blodgett films, **160**, 279
the crystalline structure of two-dimensional cyanine dye single crystals as revealed by electron diffraction, **160**, 251
the deposition and characterization of multilayers of the ionophore valinomycin, **160**, 483
determination of interlayer electron hop time in a Langmuir–Blodgett multilayer, **160**, 171
direct characterization of monolayers at the air–water interface, **159**, 1
drawing fine patterns on *N*–octadecylacrylamide Langmuir–Blodgett multilayers: a new class of ultrathin resists, **155**, L11
effects of molecular organization on photophysical and photochemical behaviour: quenching by subphase iodide of fluorescence in pyrene-bearing probes at the nitrogen–water interface, **159**, 133
electric-field-induced domain movement in phospholipid monolayers, **159**, 125
electric field mapping in conducting Langmuir–Blodgett films, **159**, 413
electron diffraction studies of Langmuir–Blodgett film structures with potential for optical applications, **160**, 491
electron microscopy of TFOF1 Langmuir–Blodgett films, **159**, 479
electron spin resonance study of Langmuir–Blodgett films of *N*-docosylpyridinium-di(tetracyanoquinodimethane), **160**, 139
electron transfer quenching of excited pyrene or $Ru(II)(bpy)^+$ derivatives in Langmuir–Blodgett films by donor or acceptor molecules with different redox potentials, **160**, 317
energy transfer and aggregation in monolayers containing porphyrins and phthalocyanines, **159**, 115
energy transfer between fluorescent dyes spaced by multilayers of cadmium salts of fatty acids, **160**, 347
energy transfer between J-aggregated dye monolayers, **160**, 241

energy transfer to water-soluble anionic dyes absorbed on fluorophore-containing Langmuir–Blodgett films, **160**, 287
entrainment of aqueous subphase in Langmuir–Blodgett films, **159**, 191
enzyme-immobilized Langmuir–Blodgett film for a biosensor, **160**, 463
fabrication of ordered Langmuir–Blodgett multilayers of octa-*n*-alkoxy phthalocyanines, **159**, 395
fluorescence anisotropy studies of orientational order of Langmuir–Blodgett multilayers, **159**, 101
fluorescent dye monolayers on oxidized silicon, **160**, 341
formation and conductivity of lipid-free multilayer systems of copper phthalocyanine, **159**, 239
formation of organic heterostructures into p–n heterojunctions by surface pressure control, **160**, 165
Fourier transform IR spectroscopy of protonated cadmium arachidate layers in different positions of a perdeuterated multilayer, **159**, 443
Fourier transform IR studies of alternate layer acid–amine Langmuir–Blodgett films with pyroelectric properties, **159**, 461
Fourier transform Raman spectroscopy of thin films, **160**, 311
Hall effect in conducting Langmuir–Blodgett films of a ternary tetracyanoquinodimethane salt, **161**, L73
heat-stable aromatic polymer precursors as Langmuir–Blodgett film materials, **160**, 21
highly conducting Langmuir–Blodgett films of the TMTTF–CnTCNQ system, **160**, 61
hydrated polar groups in lipid monolayers: effective local dipole moments and dielectric properties, **159**, 73
an investigation of conductivity in metal-substituted phthalocyanine Langmuir–Blodgett films, **155**, 1
interdependence between crystallization and polymerization in diacetylene monolayers, **159**, 63
IR studies of pyroelectric Langmuir–Blodgett films, **155**, 187
isothermal desorption study of organic molecules in Langmuir–Blodgett films using attenuated total reflection, **156**, L17
Langmuir–Blodgett films of acetalized poly(vinyl alcohol)s, **161**, 305
Langmuir–Blodgett films of amphiphilic cyclodextrins, **159**, 353
Langmuir–Blodgett films as chemical sensors, **160**, 413
Langmuir–Blodgett films of long-chain derivatives of ferrocene, biferrocene and oxidized ferricenium, **160**, 153
Langmuir–Blodgett films of merocyanine J-aggregates: preparation and structural change on irradiation by laser light, **165**, 323
Langmuir–Blodgett films of non-centrosymmetric azobenzene dyes for non-linear optical applications, **160**, 363
Langmuir–Blodgett films of oligo- and polythiophenes with well-defined structure, **160**, 87
Langmuir–Blodgett monolayers studied by surface-sensitive X-ray absorption fine structure, **159**, 435
linear electro-optic properties of Langmuir–Blodgett multilayers of an organic azo dye, **160**, 399
linear and non-linear optical and spectroscopic properties of Langmuir–Blodgett films, **160**, 197
measurement of fluorescence depolarization for chlorophyll-a and chlorophyll-b in spread monolayers at the nitrogen–water interface, **159**, 149
measurements of the forces of emersion and immersion and contact angles during Langmuir–Blodgett deposition, **159**, 231
medium angle X-ray scattering of Langmuir–Blodgett films of cadmium salts of fatty acids, **159**, 421
microstructure and optical properties of mixed monolayers containing a J-band forming cyanine dye and various cosurfactants, **159**, 379
molecular photodiodes consisting of unidirectionally oriented amphipathic acceptor–sensitizer–donor triads, **160**, 125
molecular recognition in monolayers and species detection by surface-enhanced resonance Raman spectroscopy, **160**, 389
monolayer characteristics of some multinucleate phthalocyanines, **159**, 141
morphology and properties of Langmuir films containing tetrakis(cumylphenoxy)phthalocyanines, **159**, 369
multipiled monolayer assembly of J-aggregates of squarylium dye with short alkyl chains, **159**, 337
near-edge X-ray absorption fine structure studies of oriented molecular chains in polyethylene and Langmuir–Blodgett monolayers on Si(111), **159**, 275

new asymmetric substitution of phthalocyanines: derivatives designed for deposition as Langmuir–Blodgett films, **159**, 469
new Langmuir–Blodgett films built up from a copper halogenide semiamphiphilic salt, **156**, L27
a novel anisotropic conducting thin film having a conducting and insulating layered structure, **160**, 67
a novel highly conducting phosphonium tetracyanoquinodimethane Langmuir–Blodgett film, **160**, 81
an optical chemical sensor using a fluorophor-embedded Langmuir–Blodgett film, **160**, 477
optical fibers coated with non-linear Langmuir–Blodgett films, **160**, 471
optical properties of Langmuir–Blodgett polydiacetylene thin films, **160**, 327
orientational studies of Langmuir–Blodgett films of porphyrins with polarized resonant Raman spectroscopy, **159**, 315
photoacoustic detection of water permeation through ultrathin films, **160**, 501
photoisomerization of the azobenzenes included in Langmuir–Blodgett films of cyclodextrins, **160**, 33
photothermal spectroscopy of dye–monolayer assemblies on solid substrates, **160**, 333
photovoltaic properties of purple membrane Langmuir–Blodgett films, **160**, 145
plasmon surface polariton fields for the characterization of thin films, **159**, 323
polarization processes in pyroelectric Langmuir–Blodgett films, **160**, 117
polymerizabilities of amphiphilic monomers with controlled arrangements in Langmuir–Blodgett films, **160**, 43
preparation and characterization of Langmuir–Blodgett films of mesoporphyrin IX dimethylester indium chloride, **157**, 69
preparation and characterization of monolayers and multilayers of preformed polymers, **159**, 221
preparation and characterization of organotransition metal Langmuir–Blodgett films, **160**, 231
preparation and characterization of poly(amide–imide) multilayer films, **160**, 15
the properties of conducting tetracyanoquinodimethane Langmuir–Blodgett films: a study using acoustoelectric devices, **160**, 53
reactions in monolayers and Langmuir–Blodgett films, **160**, 1
scanning tunnelling microscopy of thin organic films, **159**, 293
second-harmonic generation in alternate non-linear Langmuir–Blodgett films, **160**, 217
second-harmonic generation in Langmuir–Blodgett films of hemicyanine–poly(octadecyl methacrylate) and hemicyanine–behanic acid, **160**, 379
second-order non-linear optical effects in Langmuir–Blodgett films, **160**, 355
spin transition in a magnetic Langmuir–Blodgett film, **160**, 107
the spectroscopic behaviour of J-aggregates of cyanine dyes without long chains incorporated in the monolayer assemblies, **160**, 303
the spontaneous formation of J-like aggregate in Langmuir–Blodgett films of a squarylium dye, **160**, 299
Stark spectroscopy of Langmuir–Blodgett monolayers and multilayers, **160**, 271
structural and electrical studies of alternating layers of porphyrins and fatty acids, **160**, 99
structural studies of intermolecular interactions in pure and diluted films of a redox-active phthalocyanine, **159**, 83
structure and dynamics of deposited lipid monolayers: low energy electron diffraction and scattering of thermal energy helium atoms, **159**, 429
structure and dynamics in a Langmuir–Blodgett film at elevated temperatures, **159**, 359
structure and temperature dependence of fatty acid Langmuir–Blodgett films studied by neutron and X-ray scattering, **159**, 253
study on the photoreaction process of 6-octadecyl sulphane imide naphthoquinone diazide Langmuir films, **159**, 91
surface acoustic wave sensors incorporating Langmuir–Blodgett films, **160**, 445
surface plasmon resonance studies of gas effects in phthalocyanine Langmuir–Blodgett films, **160**, 431
surface pressure dependence of molecular tilt in Langmuir–Blodgett films of 22-tricosenoic acid, **161**, 325
surface rheology of spread monolayers, **159**, 171
surface structure investigation of Langmuir–Blodgett films, **159**, 301
synchroton diffraction studies of lead octadecanoate, tetracosanoic acid and 1-eicosanol monolayers on water, **159**, 111
synchroton X-ray study of the structure of a Langmuir monolayer and the attached solute molecular layer, **159**, 29
synthesis of electrically conductive polypyrroles at the air–water interface of a Langmuir–Blodgett film balance, **160**, 187

thermochromic Langmuir–Blodgett films of a novel amphiphilic azo dye with homogeneous chromophore orientation, **160**, 407
thermostability and photodesorption of Langmuir–Blodgett films, **159**, 387
third-order hyperpolarizability of centrosymmetric Langmuir–Blodgett films of stilbazolium dyes, **160**, 209
two-step transfer of conducting Langmuir films from a glycerol subphase, **159**, 207
using the transfer of a Langmuir monolayer as a probe of wetting, **159**, 215
vibrational Davydov splitting in 7-(2-anthryl)-1-heptanoic acid Langmuir–Blodgett films, **159**, 331
viscoelasticity of pentadecanoic acid monolayers, **159**, 159
X-ray diffraction of Langmuir–Blodgett films: establishing a new method for the calculation of electron density distributions from a single set of intensity data, **159**, 451
X-ray diffraction and optical studies of Langmuir–Blodgett films formed from azobenzene derivatives, **155**, 343
X-ray and neutron reflectivity from spread monolayers, **159**, 43
an X-ray scattering study of lipid monolayers at the air–water interface and on solid supports, **159**, 17

Lanthanum
electrochromic characteristics of La_2O_3–WO_3 thin films, **161**, 67
vapour-deposited superconducting lanthanum sulphide films, **156**, 271

Lasers
absorption and laser damage resistance of TiO_2 thin films deposited on laser-irradiated substrates, **162**, 217
argon fluoride laser-activated deposition of nitride films, **163**, 255
CO_2-laser-induced chemical vapour deposition of polycrystalline silicon from silane, **155**, 75
correlation between morphology, optical losses and laser damage of MgF_2–SiO_2 multilayers, **156**, 1
Langmuir–Blodgett films of merocyanine J-aggregates: preparation and structural change on irradiation by laser light, **165**, 323
laser-induced chemical vapour deposition and characterization of amorphous silicon oxide films, **157**, 105
monolayer growth and direct writing of GaAs by pulsed laser metal–organic vapour phase epitaxy, **163**, 405
pulsed-laser-induced and ion-beam-induced surface synthesis and modification of oxides, nitrides and carbides, **163**, 215
the role of thermal conductivity in the pulsed laser damage sensitivity of optical thin films, **163**, 203

Lead
Al–PbO–Ag as a solid electrolyte cell, **155**, 31
amorphous PbSe films: growth and properties, **165**, 303
the depth profile of the elements in lead chalcogenide layers, **161**, 281
effect of deposition parameters on the deposition characteristics of chemically vapour-deposited $PbTiO_3$, **165**, 291
electron spin resonance studies on the superlattices PbTe–$Pb_{1-x}Eu_xTe$ prepared by hot wall epitaxy, **161**, 149
growth of $Pb_{0.82}Sn_{0.18}Te$ by molecular beam epitaxy, **161**, 171
study of lead(II) chloride solid electrolyte thin film galvanic cells doped with alkali chlorides, **161**, 77
synchroton diffraction studies of lead octadecanoate, tetracosanoic acid and 1-eicosanol monolayers on water, **159**, 111
X-ray studies of thermal vibrations of thin lead films, **164**, 91

Light
electrical characteristics of PtSi formed by incoherent light annealing, **164**, 387
light bending and light confinement of isotopic boundaries—possibility of isotopic fiber optics, **158**, L37
light-induced changes in magnetron-sputtered hydrogenated amorphous silicon films, **164**, 227
an original device for measuring reflection factors of a thick metallic film in polarized light, **165**, 211
single-layer-coated optical devices for polarized light, **163**, 33
theory of light reflection from a substrate sparsely seeded with spheres: comparison with an ellipsometric experiment, **164**, 63

Light amplifier
Bi-stable photoconductive–electroluminescent type of light amplifier with optical feedback, **164**, 411

Lipids
hydrated polar groups in lipid monolayers: effective local dipole moments and dielectric properties, **159**, 73
structure and dynamics of deposited lipid monolayers: low energy electron diffraction

and scattering of thermal energy helium atoms, **159**, 429
an X-ray scattering study of lipid monolayers at the air–water interface and on solid supports, **159**, 17
Liquid crystals
application of tantalum-based thin film devices in active matrix addressed liquid crystal displays, **164**, 327
the characterization of Langmuir–Blodgett films of a non-linear optical, side-chain liquid-crystalline polymer, **161**, 315
control of structure in Langmuir–Blodgett films of terphenyl liquid crystal compounds, **159**, 345
Local equilibrium model
local equilibrium model of morphological instabilities in chemical vapour deposition, **158**, 313
Lubricants
characterization of monolayer and bilayer (polymer/monolayer) structures for their use as a lubricant, **160**, 453
solid lubricating fluorine-containing polymer film synthesized by perfluoropolyether sputtering, **158**, 51
Luminescence
conducting luminescent ZnS films formed by plasma-assisted metal–organic chemical vapour deposition, **162**, 263

M

Magnesium
correlation between morphology, optical losses and laser damage of MgF_2–SiO_2 multilayers, **156**, 1
internal stress and adhesion of r.f.-sputtered MgO films on glass substrates, **164**, 169
ion beam mixing of silver–magnesium oxide multilayers, **165**, 347
Magnetic field
effect of applied external magnetic field on the relationship between the arrangement of the substrate and the resistivity of aluminium-doped ZnO thin films prepared by r.f. magnetron sputtering, **164**, 275
Magnetic properties
determination of thickness uniformity and magnetic bubble parameters for garnet thin films by Faraday rotation, **164**, 191
dipole–dipole interaction in the diffused interlayer of magnetic superlattices, **161**, L83
magnetic and magnetoresistive properties of multilayered Permalloy thin films, **158**, 167
magnetization reversal model for vertical recording films, **158**, 7
spin transition in a magnetic Langmuir–Blodgett film, **160**, 107
thermally induced reversible easy axis rotations in Permalloy thin films, **162**, 375
X-ray characterization of epitaxially grown dilute magnetic semiconductors $Zn_{1-x}Fe_xSe$ $(0 < x < 0.22)$, **164**, 111
Magneto-optical properties
ellipsometric comparisons of rare earth–transition metal alloy films in connection with magneto-optical recording, **162**, 89
modelling magneto-optical thin film media for optical data storage, **164**, 391
Magnetoresistive properties
magnetic and magnetoresistive properties of multilayered Permalloy thin films, **158**, 167
Manganese
dislocations in epitaxial $Cd_{0.9}Mn_{0.1}Te$ films, **159**, L65
growth of Al–Mn quasicrystals by vacuum deposition, **163**, 61
kinetic properties and energy transfer in the electro-luminescence of thin film cells based on ZnS:Mn, **161**, 59
low-voltage-driven a.c. thin film electroluminescent cell containing a ZnS:Mn film deposited by molecular beam epitaxy, **162**, 73
low-voltage-driven ZnS:Mn thin film electroluminescent devices using insulating dielectric ceramic sheets, **164**, 363
optical properties and dielectric function of manganese telluride thin films, **157**, 1
optical constants of $Cd_{1-y}Mn_yTe$ thin films, **165**, 91
organometallic chemical vapour phase deposition of "Mn_2Si", **156**, 327
properties of undoped and manganese-doped InGaAsP grown by liquid phase electroepitaxy, **163**, 427
a solution growth technique for the deposition of manganese sulphide thin film, **158**, 271
study of surface segregation of simultaneously evaporated Mn–Ag alloy films by means of ion scattering spectroscopy and Auger electron spectroscopy, **164**, 37
Mechanical properties
characterizing the hardness and modulus of thin films using a mechanical properties microprobe, **161**, 117
mechanical properties of r.f. magnetron-sputtered W–C films on stainless steel, **161**, 107

Memory devices
electrical properties of ferroelectric thin film KNO_3 memory devices, **164**, 339
Mercury
HgCdTe thin films for solar cells application prepared by multisource evaporation, **157**, 175
high capability, quasi-closed growth system for isothermal vapour phase epitaxy of (Hg, Cd)Te, **161**, 157
Merocyanine
characterization of in-plane and out-of-plane molecular orientation in Langmuir–Blodgett films of merocyanine dyes using electron spin resonance, **159**, 285
Langmuir–Blodgett films of merocyanine J-aggregates: preparation and structural change on irradiation by laser light, **165**, 323
Metal films
adhesion of thin metallic films to non-metallic substrates, **164**, 147
the field effect of the electrical conductance of discontinuous thin metal films, **164**, 183
an original device for measuring reflection factors of a thick metallic film in polarized light, **165**, 211
the role and structure of microclusters in metal deposition onto weak-bonding substrates, **163**, 285
size-dependent quantum and classicial transport in metallic thin films, **164**, 141
Metal/insulator/metal devices
in situ electrical property measurements of metal/(plasma polysiloxane)/metal structures, **155**, 175
time domain responses of the $Al/Dy_2O_3/Al$ thin film capacitors and their a.c. characteristics, **157**, 13
metal/insulator/semiconductor diodes
some electrical properties of the GaAs–anodic oxide interface on the basis of measurements of the capacitance–voltage and conductance–voltage characteristics of metal–oxide–semiconductor structures, **165**, 21
high pressure oxidation of Si(100) for production of ultrathin oxide metal/insulator/semiconductor diodes, **156**, 243
Metastable structures
ion-assisted deposition and metastable structures, **163**, 13
Microelectronics
plasma-enhanced chemical vapour deposition silicon nitride for microelectronic applications, **164**, 309
Mirage detection
thermal diffusivity measurement of micron-thick semiconductor films by mirage detection, **155**, 165
Modulated structures
structure and properties of strained compositionally modulated Cu–Ni and Pd–Ni films, **163**, 491
study of the growth mechanism of modulated structures in the InAs–GaAs system, **163**, 497
Molecular beam epitaxy
growth of $Pb_{0.82}Sn_{0.18}Te$ by molecular beam epitaxy, **161**, 171
low-voltage-driven a.c. thin film electroluminescent cell containing a ZnS:Mn film deposited by molecular beam epitaxy, **162**, 73
molecular beam epitaxy of AlAs/GaAs heterostructures and superlattices, **163**, 1
Molecular organization
effects of molecular organization on photophysical and photochemical behaviour: quenching by subphase iodide of fluorescence in pyrene-bearing probes at the nitrogen–water interface, **159**, 133
Molecular recognition
molecular recognition in monolayers and species detection by surface-enhanced resonance Raman spectroscopy, **160**, 389
Molybdenum
characterization of $MoSe_2$ thin films, **158**, 285
the effects of oxygen concentration in sputter-deposited molybdenum films, **165**, 243
molybdenum disilicide formation by ion beam mixing and rapid thermal annealing of Mo/Si(111), **164**, 449
reactions of Co/Mo bilayers and amorphous $Co_{50}Mo_{50}$ alloy films with silicon substrates, **162**, 199
structure, optical and electro-optical properties of polycrystalline WO_3 and MoO_3 thin films prepared by chemical vapour deposition, **164**, 333
synthesis and properties of thin film polymorphs of molybdenum trioxide, **155**, 53
Monolayers
characterization of monolayer and bilayer (polymer/monolayer) structures for their use as a lubricant, **160**, 453
a comparison of second-harmonic generation and electro-optic studies of Langmuir–Blodgett monolayers of new hemicyanine dyes, **156**, 39
continuous recording of the evaporation rate of water through monolayers, **159**, 53
direct characterization of monolayers at the

air–water interface, **159**, 1
electric-field-induced domain movement in phospholipid monolayers, **159**, 125
energy transfer and aggregation in monolayers containing porphyrins and phthalocyanines, **159**, 115
energy transfer between J-aggregated dye monolayers, **160**, 241
fluorescent dye monolayers on oxidized silicon, **160**, 341
hydrated polar groups in lipid monolayers: effective local dipole moments and dielectric properties, **159**, 73
the interaction of copper and nickel: nickel monolayers on a Cu{100} single crystal, **156**, 65
interdependence between crystallization and polymerization in diacetylene monolayers, **159**, 63
IR ellipsometry study of oriented molecular monolayers, **156**, 295
Langmuir–Blodgett monolayers studied by surface-sensitive X-ray absorption fine structure, **159**, 435
measurement of fluorescence depolarization for chlorophyll-a and chlorophyll-b in spread monolayers at the nitrogen–water interface, **159**, 149
microstructure and optical properties of mixed monolayers containing a J-band forming cyanine dye and various cosurfactants, **159**, 379
molecular recognition in monolayers and species detection by surface-enhanced resonance Raman spectroscopy, **160**, 389
monolayer characteristics of some multinucleate phthalocyanines, **159**, 141
monolayer growth and direct writing of GaAs by pulsed laser metalorganic vapour phase epitaxy, **163**, 405
multipiled monolayer assembly of J-aggregates of squarylium dye with short alkyl chains, **159**, 337
phase transition in adsorbed layers
IX: the influence of geometric and energetic factors on gas–liquid–solid equilibria in two-component monolayers formed on crystalline solid surfaces, **161**, 351
photothermal spectroscopy of dye–monolayer assemblies on solid substrates, **160**, 333
preparation and characterization of monolayers and multilayers of preformed polymers, **159**, 221
reactions in monolayers and Langmuir–Blodgett films, **160**, 1
the spectroscopic behaviour of J-aggregates of cyanine dyes without long chains incorporated in the monolayer assemblies, **160**, 303
Stark spectroscopy of Langmuir–Blodgett monolayers and multilayers, **160**, 271
structure and dynamics of deposited lipid monolayers: low energy electron diffraction and scattering of thermal energy helium atoms, **159**, 429
surface rheology of spread monolayers, **159**, 171
surface properties of a long-chain 10:12 diynoic acid monolayer at air–liquid and solid–liquid interfaces, **155**, 255
synchroton X-ray study of the structure of a Langmuir monolayer and the attached solute molecular layer, **159**, 29
synchroton diffraction studies of lead octadecanoate, tetracosanoic acid and 1-eicosanol monolayers on water, **159**, 111
using the transfer of a Langmuir monolayer as a probe of wetting, **159**, 215
viscoelasticity of pentadecanoic acid monolayers, **159**, 159
X-ray and neutron reflectivity from spread monolayers, **159**, 43
an X-ray scattering study of lipid monolayers at the air–water interface and on solid supports, **159**, 17

Monomers
polymerizabilities of amphiphilic monomers with controlled arrangements in Langmuir–Blodgett films, **160**, 43

Morphology
correlation between morphology, optical losses and laser damage of MgF_2–SiO_2 multilayers, **156**, 1
local equilibrium model of morphological instabilities in chemical vapour deposition, **158**, 313
morphology and structure of gold, silver and copper layers obtained by sputtering during ion bombardment of targets from these metals, **157**, 315
morphology and properties of Langmuir films containing tetrakis(cumylphenoxy)phthalocyanines, **159**, 369

Multilayers
aligned textures in multilayers of cadmium arachidate as seen by electron microscopy, **159**, 405
the deposition and characterization of multilayers of the ionophore valinomycin, **160**, 483
determination of interlayer electron hop time in a Langmuir–Blodgett multilayer, **160**, 171
fabrication of ordered Langmuir–Blodgett mul-

tilayers of octa-*n*-alkoxy phthalocyanines, **159**, 395
fluorescence anisotropy studies of orientational order of Langmuir–Blodgett multilayers, **159**, 101
formation and conductivity of lipid-free multilayer systems of copper phthalocyanine, **159**, 239
Fourier transform IR spectroscopy of protonated cadmium arachidate layers in different positions of a perdeuterated multilayer, **159**, 443
grain boundary diffusion in Ni–Cu multilayer films, **162**, 155
ion beam mixing of silver–magnesium oxide multilayers, **165**, 347
linear electro-optic properties of Langmuir–Blodgett multilayers of an organic azo dye, **160**, 399
multilayer amorphous semiconductors, **163**, 55
optical reflection and absorption of metallic multilayer films, **163**, 485
preparation and characterization of poly(amide–imide) multilayer films, **160**, 15
preparation and characterization of monolayers and multilayers of preformed polymers, **159**, 221
Stark spectroscopy of Langmuir–Blodgett monolayers and multilayers, **160**, 271
structure and properties of W/C and Ni/C multilayer films, **164**, 405

N

Neutron studies
structure and temperature dependence of fatty acid Langmuir–Blodgett films studied by neutron and X-ray scattering, **159**, 253
X-ray and neutron reflectivity from spread monolayers, **159**, 43
Nickel
black nickel–cobalt: selective coatings prepared by a conversion process, **156**, 93
a comparison between amorphous Ni–Zr alloys formed by solid state reaction and by codeposition, **164**, 199
d.c. conductivity of highly disordered NiCr–O thin films, **164**, 455
effects of heat treating Au/Ni thin film composites in various ambients, **162**, 247
gas phase aluminide coatings on nickel-base superalloy IN 713, **156**, 259
grain boundary diffusion in Ni–Cu multilayer films, **162**, 155
the interaction of copper and nickel: nickel monolayers on a Cu{100} single crystal, **156**, 65
investigation of sliding contact resistance of Ni–Cr/Au and Ni–Cr/Au–SiO_2 thin resistive films, **164**, 129
partial epitaxial growth of Ni_2Ge and NiGe on Ge(111), **162**, 287
patterned photoassisted organometallic deposition of iron, nickel and palladium on silicon, **156**, L31
resistivity anisotropy of nickel films induced by oblique incidence sputter deposition, **164**, 165
structure and properties of strained compositionally modulated Cu–Ni and Pd–Ni films, **163**, 491
structure and properties of W/C and Ni/C multilayer films, **164**, 405
studies of the interaction between aluminium and nickel, chromium and nichrome alloy films, **162**, 171
time-resolved study of thin nickel silicide layer growth at the nickel film–Si(100) interface, **164**, 481
Niobium
anodic oxidation of niobium in aqueous solution of weak organic acids, **155**, 115
f.c.c. niobium films grown by halide chemical vapour deposition on ultrasound-vibrating substrates, **158**, 123
kinetics of growth of anodic oxide film on niobium in aqueous electrolyte, **158**, 245
partial epitaxial growth of $NbSi_2$ on Si(111), **161**, 263
Nitrates
electrical properties of ferroelectric thin film KNO_3 memory devices, **164**, 339
Nitrogen
argon fluoride laser-activated deposition of nitride films, **163**, 255
a comparative Rutherford backscattering spectrometry and Auger electron spectroscopy depth profile study of Fe–N films, **161**, L69
correlation between stress and structure in chemically vapour-deposited silicon nitride films, **162**, 129
dependence of microstructure of TiN coatings on their thickness, **158**, 225
effect of Si_3N_4 encapsulation on the thermal processing of hydrogenated amorphous silicon, **161**, 181
effects of the buffer layer in metalorganic vapour phase epitaxy of GaN on sapphire substrate, **163**, 415
the effects of deposition variables on deposition

rate in the chemical vapour deposition of silicon nitride, **155**, 87
the deposition and film properties of reactively sputtered titanium nitride, **161**, 289
electrical properties of plasma-deposited fluorinated silicon nitride, **162**, 59
electrical properties of Ti–Si–N thin cermet films deposited in a triode sputtering system with a hot cathode, **162**, 111
energy barrier height measurements of chemically vapour-deposited P_3N_5 films by internal photoinjection, **162**, 41
fabrication of transition metal nitride films using a shock wave plasma, **163**, 233
failure mechanisms of TiN thin film diffusion barriers, **164**, 417
the influence of the physicochemical characteristics of the substrate surface on the deposited TiN film properties, **163**, 309
influence of temperature on the growth of TiN films by plasma-assisted chemical vapour deposition, **161**, 687
IR transmittance studies of hydrogen-free and hydrogenated silicon nitride and silicon oxynitride films deposited by reactive sputtering, **155**, 301
low temperature growth of AlN and Al_2O_3 films by the simultaneous use of a microwave ion source and an ionized cluster beam system, **157**, 143
some new results on the electronic properties of a-Si and a-SiN_x, **163**, 85
nitrogen migration and nitride formation during low temperature reactive annealing of titanium, **156**, 117
optical properties of sputtered AlN films and coated GaAs, **158**, L39
physico-chemical properties of photo-CVD silicon nitride thin films, **165**, 279
plasma-assisted chemical vapour deposition of TiN and TiC on steel: properties of coatings, **165**, 139
plasma-enhanced chemical vapour deposition of silicon nitride for microelectronic applications, **164**, 309
positron lifetime study of vacancy defects in non-stoichiometric TiN_x and TiC_x films, **163**, 49
preparation, properties and applications of boron nitride thin films, **157**, 267
properties of sputtered nitride semiconductors, **164**, 441
pulsed-laser-induced and ion-beam-induced surface synthesis and modification of oxides, nitrides and carbides, **163**, 215
regularities of growth and electrical properties in the plasma-enhanced deposition of silicon nitride, **157**, 337
structure of TiN coatings deposited at relatively high rates and low temperatures by magnetron sputtering, **156**, 53
studies of some properties of mechanical stress in a-Si:H, a-SiN_x:H and a-Si:H/a-SiN_x:H heterojunction films, **165**, 173
surface modification in nitrogen-ion-implanted stainless steel, **163**, 359
synthesis of buried silicon nitride layers by rapid thermal annealing, **164**, 429
TiC and TiN coatings formed on Si_3N_4–TiC composite ceramics by chemical vapour deposition, **165**, 149
variations in the reflectance of TiN, ZrN and HfN, **157**, 255

Nitrogen dioxide
IR response of phthalocyanine thin films to nitrogen dioxide, **165**, 83

Nucleation
epitaxial nucleation and growth kinetics of indium phosphide in an In–PH_3–HCl–H_2 system, **163**, 437
the initial nucleation and growth of gold on sodium chloride for substrate temperatures between 123 and 448 K, **155**, 267

O

Obliquely deposited films
columnar structure of obliquely deposited iron films prepared at low substrate temperatures, **158**, 239
columnar and textural structures in obliquely deposited iron films, **163**, 379
resistivity anisotropy of nickel films induced by oblique incidence sputter deposition, **164**, 165

Optical data storage
modelling magneto-optical thin film media for optical data storage, **164**, 391

Optical fibers
optical fibers coated with non-linear Langmuir–Blodgett films, **160**, 471

Optical films
computer design of optical coatings, **163**, 97
electric-field-assisted deposition of optical coatings, **156**, 153
the role of thermal conductivity in the pulsed laser damage sensitivity of optical thin films, **163**, 203
single-layer-coated optical devices for polarized light, **163**, 33

Optical properties
the characterization of Langmuir–Blodgett films of a non-linear optical, side-chain liquid-crystalline polymer, **161**, 315
correlation between morphology, optical losses and laser damage of MgF_2–SiO_2 multilayers, **156**, 1
electron diffraction studies of Langmuir–Blodgett film structures with potential for optical applications, **160**, 491
Langmuir–Blodgett films of non-centrosymmetric azobenzene dyes for non-linear optical applications, **160**, 363
linear and non-linear optical and spectroscopic properties of Langmuir–Blodgett films, **160**, 197
medium optical index material tailoring by plasma-enhanced chemical vapour deposition, **164**, 375
microstructural, optical and electrical studies of sputtered epitaxial CdTe films, **163**, 409
microstructure and optical properties of mixed monolayers containing a J-band forming cyanine dye and various cosurfactants, **159**, 379
optical absorption and hydrogen content of plasma-deposited carbon films, **157**, 29
optical absorption of ion-implanted amorphous silicon, **163**, 331
optical analysis of inhomogeneous weakly absorbing thin films by spectroscopic reflectometry: application to carbon films, **162**, 101
optical constants of $Cd_{1-y}Mn_y$ Te thin films, **165**, 91
optical and electrical properties of deposited films of Si(phthalocyaninato) $(OH)_2$, **157**, 189
optical and electrical properties of semiconducting rhenium disilicide thin films, **162**, 29
optical properties of as-grown and reduced TeO_2films, **161**, 101
optical properties and dielectric function of manganese telluride thin films, **157**, 1
optical properties of Langmuir–Blodgett polydiacetylene thin films, **160**, 327
optical properties of native oxides on InP, **162**, 81
optical properties of sputtered AlN films and coated GaAs, **158**, L39
optical properties of the thermal oxide–GaAs rough interface, **155**, 217
the optical properties of YF_3 films, **155**, 17
optical reflection and absorption of metallic multilayer films, **163**, 485
reflectometry measurement of optical parameters of $Au/SiO_2/Si$ films, **156**, 11
second-order non-linear optical effects in Langmuir–Blodgett films, **160**, 355
simple method of spectroscopic reflectometry for the complete optical analysis of weakly absorbing thin films: application to silicon films, **156**, 181
structural, optical and electrical properties of evaporated and sputtered Au–Cr thin films, **165**, 29
structure, optical and electro-optical properties of polycrystalline WO_3 and MoO_3 thin films prepared by chemical vapour deposition, **164**, 333
X-ray diffraction and optical studies of Langmuir–Blodgett films formed from azobenzene derivatives, **155**, 343
Optics
exposure characteristics of electron-beam-induced silver doping and its application to grating device fabrication in chalcogenide glass films, **165**, 55
ion beam sputter deposition of low loss Al_2O_3 films for integrated optics, **165**, 1
light bending and light confinement of isotopic boundaries—possibility of isotopic fiber optics, **158**, L37
an original device for measuring reflection factors of a thick metallic film in polarized light, **165**, 211
Optoelectronic properties
effect of bath temperature on the optoelectronic characteristics of chemically deposited CdS thin films, **161**, 21
silicon thin films for optoelectronic temperature sensors, **158**, 1
Organic compounds
anodix oxidation of niobium in aqueous solution of weak organic acids, **155**, 115
isothermal desorption study of organic molecules in Langmuir–Blodgett films using attenuated total reflection, **156**, L17
Organic conductors
conducting Langmuir–Blodgett films as electrode materials, **160**, 133
electric field mapping in conducting Langmuir–Blodgett films, **159**, 413
Hall effect in conducting Langmuir–Blodgett films of a ternary tetracyanoquinodimethane salt, **161**, L73
highly conducting Langmuir–Blodgett films of the TMTTF–CnTCNQ system, **160**, 61
a novel anisotropic conducting thin film having a conducting and insulating layered structure, **160**, 67
a novel highly conducting phosphonium tetra-

cyanoquinodimethane Langmuir–Blodgett film, **160**, 81
the properties of conducting tetracyanoquinodimethane Langmuir–Blodgett films: a study using acoustoelectric devices, **160**, 53
two-step transfer of conducting Langmuir films from a glycerol subphase, **159**, 207
Organic films
electrical properties of pure, doped and sensitized organic dye films, **164**, 249
scanning tunnelling microscopy of thin organic films, **159**, 293
UV light-assisted vacuum deposition of spiropyran compounds, **162**, 343
Organometallic compounds
preparation and characterization of Langmuir–Blodgett films of mesoporphyrin IX dimethylester indium chloride, **157**, 69
preparation and characterization of organotransition metal Langmuir–Blodgett films, **160**, 231
thin films prepared from tetramethyltin, **155**, 65
Orientation
characterization of in-plane and out-of-plane molecular orientation in Langmuir–Blodgett films of merocyanine dyes using electron spin resonance, **159**, 285
fluorescence anisotropy studies of orientational order of Langmuir–Blodgett multilayers, **159**, 101
near-edge X-ray absorption fine structure studies of oriented molecular chains in polyethylene and Langmuir–Blodgett monolayers on Si(111), **159**, 275
orientational effects in adsorption
IV: application of the van der Waals theory to the description of submonolayer films of linear molecules on solid surfaces, **161**, 367
orientational studies of Langmuir–Blodgett films of porphyrins with polarized resonant Raman spectroscopy, **159**, 315
Oxidation
anodic oxidation of niobium in aqueous solution of weak organic acids, **155**, 115
electrical properties of thin films of In_2O_3 prepared by post-oxidation of evaporated metal, **157**, 181
high pressure oxidation of Si(100) for production of ultrathin oxide metal/insulator/semiconductor diodes, **156**, 243
long-time air oxidation and oxide–substrate reactions on GaSb, GaAs and GaP at room temperature studied by X-ray photoelectron spectroscopy, **156**, 127
the oxidation of PtSi, Pt_2Si and polycrystalline silicon in ultrahigh vacuum residual gas, **158**, 61
Oxides
absorption and laser damage resistance of TiO_2 thin films deposited on laser-irradiated substrates, **162**, 217
Al–PbO–Ag as a solid electrolyte cell, **155**, 31
alkoxide-derived amorphous ZrO_2 coatings, **163**, 273
capacitance–voltage properties of thin Ta_2O_5 films on silicon, **156**, 207
change in water vapour adsorption kinetics in chemically vapour-deposited SiO_2 films after ion irradiation, **161**, 343
characterization and microhardness measurement of electron-beam-evaporated alumina coatings, **165**, 163
characterization of reactively r.f.-sputtered tantalum oxide films, **162**, 325
comparison of the electrical properties of polyimide films containing surface metal oxide: cobalt oxide *vs.* tin oxide, **158**, 189
d.c. conductivity of highly disordered NiCr–O thin films, **164**, 455
determination of the thickness of thin titanium dioxide films from photoacoustic interference signals, **155**, 295
dielectric relaxation in Co–Al_2O_3 composite films, **165**, 67
effect of applied external magnetic field on the relationship between the arrangement of the substrate and the resistivity of aluminium-coped ZnO thin films prepared by r.f. magnetron sputtering, **164**, 275
effect of deposition parameters on the deposition characteristics of chemically vapour-deposited $PbTiO_3$, **165**, 291
the effect of In_2O_3 on the electrical and structural properties of $CuInSe_2$ prepared by chemical spray pyrolysis, **159**, L53
effect of n^+-polycrystalline silicon rapid thermal annealing on the electrical properties of the gate oxide, **162**, 21
effects of oxygen partial pressure on the properties of reactively evaporated thin films of indium oxide, **156**, 161
electrical characteristics of ion-beam-synthesized aluminium oxide layers, **163**, 317
electrical properties of thin films of In_2O_3 prepared by post-oxidation of evaporated metal, **157**, 181
electrical properties of thulium oxide thin films, **164**, 175
electrochromic characteristics of La_2O_3–WO_3 thin films, **161**, 67

electrochromism in anodic WO_3 films
I: preparation and physicochemical properties of films in the virgin and coloured states, **161**, 35
electrochromism in anodic WO_3 films
II: optical and electrochromic properties of coloured "distorted" hexagonal films, **161**, 47
electrochromism in polycrystalline WO_3 thin films prepared by chemical vapour deposition at high temperature, **164**, 369
electromechanical properties of thin VO_2 films on polyimide substrates, **158**, L49
exciton diffusion in thin Cu_2O films, **164**, 289
growth kinetics of thin anodic oxides of silicon and its dependence on phosphorus concentration in silicon, **163**, 373
a high resolution transmission electron microscopy study of ZrO_2–CaO films, **162**, 235
indium tin oxide films from metal–organic precursors, **161**, 273
intermixing of Co/Gd_xO_y thin films on kapton polyimide, **157**, 223
internal stress and adhesion of r.f.-sputtered MgO films on glass substrates, **164**, 169
investigation of plasma-grown planar alumina films for use in the modelling of bulk alumina, **155**, 133
investigation of the porosity of thin anodic Al_2O_3 films by interference of photoluminescence radiation, **157**, 59
ion beam sputter deposition of low loss Al_2O_3 films for integrated optics, **165**, 1
IR transmittance studies of hydrogen-free and hydrogenated silicon nitride and silicon oxynitride films deposited by reactive sputtering, **155**, 301
kinetics of growth of anodic oxide film on niobium in aqueous electrolyte, **158**, 245
laser-induced chemical vapour deposition and characterization of amorphous silicon oxide films, **157**, 105
long-time air oxidation and oxide–substrate reactions on GaSb, GaAs and GaP at room temperature studied by X-ray photoelectron spectroscopy, **156**, 127
low temperature growth of AlN and Al_2O_3 films by the simultaneous use of a microwave ion source and an ionized cluster beam system, **157**, 143
measurement of the adhesion of silver films to oxidized silicon, **164**, 153
mechanics of film formation during the spray pyrolysis of tin oxide, **165**, 265
modelling of ^{18}O tracer studies of the oxygen redistribution during formation of SiO_2 layers by high dose implantation, **161**, 333
optical properties of as-grown and reduced TeO_2 films, **161**, 101
optical properties of native oxides on InP, **162**, 81
optical properties of the thermal oxide–GaAs rough interface, **155**, 217
the oxygen electrode reaction in acid solutions on RuO_2 electrodes prepared by the thermal decomposition method, **163**, 301
photoconductivity studies of indium/epindolidione/indium tin oxide sandwich cells, **158**, 175
photovoltaic properties of ZnO/p-CdTe thin film heterojunctions, **164**, 295
photovoltaic study of anodically grown oxide films on Ag–Cu alloys, **161**, 207
potentiostatic electrodeposition of cuprous oxide, **157**, 87
preparation and characterization of some tin oxide films, **158**, 69
preparation and electrochemical behaviour of some metal oxide films, **158**, 277
preparation of indium tin oxide films by vacuum evaporation, **162**, 305
pulsed-laser-induced and ion-beam-induced surface synthesis and modification of oxides, nitrides and carbides, **163**, 215
quantitative interface roughness studies of copper oxide on copper, **164**, 5
reactively sputtered ZnO:Al films for energy-efficient windows, **164**, 381
reflectometry measurement of optical parameters of $Au/SiO_2/Si$ films, **156**, 11
screen-printed superconducting films of Y–Ba–Cu–O, **158**, L45
silicon dioxide films prepared by spin-on solutions, **157**, 129
spray deposition of $TbCl_3$-doped In_2O_3 photoluminescent films, **165**, 249
sputter deposition of thin tantalum layers and low temperature interactions Ta/SiO_2 and Ta/Si, **165**, 227
structural and electrical properties of screen-printed thick films of $YBa_2Cu_3O_{7-x}$ superconductors, **164**, 115
structural properties of SnO_2:F films deposited by spray pyrolysis technique, **164**, 261
structure, optical and electro-optical properties of polycrystalline WO_3 and MoO_3 thin films prepared by chemical vapour deposition, **164**, 333
study of sputtered ZnO–Pd thin films as solid state H_2 and NH_3 gas sensors, **157**, 169
synthesis and properties of thin film poly-

morphs of molybdenum trioxide, **155**, 53
theoretical description of gas–film interaction on SnO_x, **163**, 189
thermoelectric power of indium tin oxide films, **157**, 7
thin film processes for compound oxide ceramics of perovskite structure, **163**, 175
time domain responses of the $Al/Dy_2O_3/Al$ thin film capacitors and their a.c. characteristics, **157**, 13
vanadium dioxide films grown from vanadium tetraisopropoxide by the sol–gel process, **165**, 317
variations in structural and electrical properties of magnetron-sputtered indium tin oxide films with deposition parameters, **162**, 119
voltametric behaviour of anodic titanium oxide films close to the hydrogen evolution reaction, **162**, 353
X-ray photoelectron spectroscopy of O 1s and Si 2p lines in films of SiO_x formed by electron beam evaporation, **157**, 351

Oxygen
effect of mixing oxygen or diborane on the formation of amorphous carbon films from methane by r.f. plasma chemical vapour deposition, **163**, 229
the effects of oxygen concentration in sputter-deposited molybdenum films, **165**, 243
effects of oxygen partial pressure on the properties of reactively evaporated thin films of indium oxide, **156**, 161
modelling of ^{18}O tracer studies of the oxygen redistribution during formation of SiO_2 layers by high dose implantation, **161**, 333
the oxygen electrode reaction in acid solutions on RuO_2 electrodes prepared by the thermal decomposition method, **163**, 301
quaternary equilibrium phase diagram for copper, indium, selenium and oxygen, **158**, 133

P

Palladium
interfacial reactions of palladium thin films on Ge(111) and Ge(001), **162**, 295
patterned photoassisted organometallic deposition of iron, nickel and palladium on silicon, **156**, L31
structure and properties of strained compositionally modulated Cu–Ni and Pd–Ni films, **163**, 491
study of sputtered ZnO–Pd thin films as solid state H_2 and NH_3 gas sensors, **157**, 169
thin palladium films prepared by metal–organic plasma-enhanced chemical vapour deposition, **157**, 81
a work function study of the initial epitaxial growth and stability of thin copper layers on Pd(111), **163**, 447

Pattern drawing
drawing fine patterns on *N*-octadecylacrylamide Langmuir–Blodgett multilayers: a new class of ultrathin resists, **155**, L11

Permalloy
magnetic and magnetoresistive properties of multilayered Permalloy thin films, **158**, 167
thermally induced reversible easy axis rotations in Permalloy thin films, **162**, 375

Permeation
photoacoustic detection of water permeation through ultrathin films, **160**, 501

Phase composition
X-ray diffraction study of phase composition and amorphization in magnetron-sputter-deposited thin films of stainless steel–titanium, **161**, 223

Phase diagrams
quaternary equilibrium phase diagram for copper, indium, selenium and oxygen, **158**, 133

Phase transitions
phase transition in adsorbed layers IX: the influence of geometric and energetic factors on gas–liquid–solid equilibria in two-component monolayers formed on crystalline solid surfaces, **161**, 351

Phospholipids
electric-field-induced domain movement in phospholipid monolayers, **159**, 125

Phosphorus
characterization of SrF_2 thin films and of SrF_2/InP structures, **158**, 81
characterization of thin iron phosphate films on cold-rolled steel surfaces by transmission electron microscopy and electron diffraction, **162**, 183
chemical composition of native sulphides formed on InP by indirect plasma, **162**, 223
depth profile measurements of aluminium film on phosphorus-doped hydrogenated amorphous silicon layers by Auger electron spectroscopy, **155**, 325
doping of liquid phase epitaxial layers of InGaAsP with group IV elements, **163**, 421
energy barrier height measurements of chemically vapour-deposited P3N5 films by internal photoinjection, **162**, 41
epitaxial nucleation and growth kinetics of indium phosphide in an $In–PH_3–HCl–H_2$ system, **163**, 437

growth kinetics of thin anodic oxides of silicon and its dependence on phosphorus concentration in silicon, **163**, 373
long-time air oxidation and oxide–substrate reactions on GaSb, GaAs and GaP at room temperature studied by X-ray photoelectron spectroscopy, **156**, 127
optical properties of native oxides on InP, **162**, 81
properties of undoped and manganese-doped InGaAsP grown by liquid phase electroepitaxy, **163**, 427
rapid thermal annealing of arsenic-phosphorus (n^+–n^-) double-diffused shallow junctions, **161**, 131
Phosphosilicate
a study of the properties of the low temperature chemically vapour-deposited phosphosilicate glass films, **161**, L71
Photoacoustic properties
determination of the thickness of thin titanium dioxide films from photoacoustic interference signals, **155**, 295
photoacoustic detection of water permeation through ultrathin films, **160**, 501
Photochemical properties
effects of molecular organization on photophysical and photochemical behaviour: quenching by subphase iodide of fluorescence in pyrene-bearing probes at the nitrogen–water interface, **159**, 133
Photochromic reactions
controls of photochromic reactions in spiropyran Langmuir–Blodgett films, **160**, 279
Photoconductivity
bi-stable photoconductive–electroluminescent type of light amplifier with optical feedback, **164**, 411
the effect of light intensity and temperature on the transient photoconductivity in thin a-$Se_{80}Te_{20}$ films, **165**, 99
photoconductivity studies of indium/epindolidione/indium tin oxide sandwich cells, **158**, 175
Photodarkening
light intensity dependence of photodarkening in amorphous As_2S_3 films, **157**, 35
Photodeposition
patterned photoassisted organometallic deposition of iron, nickel and palladium on silicon, **156**, L31
Photodesorption
thermostability and photodesorption of Langmuir–Blodgett films, **159**, 387
Photodiodes
molecular photodiodes consisting of unidirectionally oriented amphipathic acceptor–sensitizer–donor triads, **160**, 125
Photoelectric properties
an interesting unconventional photoinduced change in the dark conductivity of a-Si:F:H, **164**, 217
photoelectrical properties of H^+-implanted CdS thin films, **156**, L21
Photoelectrochemistry
$CuInSe_2$ films for photovoltaics and photoelectrochemistry, **163**, 167
Photoinjection
energy barrier height measurements of chemically vapour-deposited P_3N_5 films by internal photoinjection, **162**, 41
Photoisomerization
photoisomerization of the azobenzenes included in Langmuir–Blodgett films of cyclodextrins, **160**, 33
Photoluminescence
investigation of the porosity of thin anodic Al_2O_3 films by interference of photoluminescence radiation, **157**, 59
spray deposition of $TbCl_3$-doped In_2O_3 photoluminescent films, **165**, 249
Photophysical properties
effects of molecular organization on photophysical and photochemical behaviour: quenching by subphase iodide of fluorescence in pyrene-bearing probes at the nitrogen–water interface, **159**, 133
Photoreaction
study on the photoreaction process of 6-octadecyl sulphane imide naphthoquinone diazide Langmuir films, **159**, 91
Photothermal spectroscopy
photothermal spectroscopy of dye–monolayer assemblies on solid substrates, **160**, 333
Photovoltaic properties
characterization of p-$CuInSe_2$ films for photovoltaics grown by a chemical deposition technique, **164**, 269
$CuInSe_2$ films for photovoltaics and photoelectrochemistry, **163**, 167
photovoltaic properties of purple membrane Langmuir–Blodgett films, **160**, 145
photovoltaic properties of thin films of plasma-polymerized acrylonitrile, **162**, 333
photovoltaic properties of ZnO/p-CdTe thin film heterojunctions, **164**, 295
photovoltaic study of anodically grown oxide films on Ag–Cu alloys, **161**, 207
Phthalocyanines
energy transfer and aggregation in monolayers

containing porphyrins and phthalocyanines, **159**, 115
fabrication of ordered Langmuir–Blodgett multilayers of octa-*n*-alkoxy phthalocyanines, **159**, 395
formation and conductivity of lipid-free multilayer systems of copper phthalocyanine, **159**, 239
an investigation of conductivity in metal-substituted phthalocyanine Langmuir–Blodgett films, **155**, 1
IR response of phthalocyanine thin films to nitrogen dioxide, **165**, 83
monolayer characteristics of some multinucleate phthalocyanines, **159**, 141
morphology and properties of Langmuir films containing tetrakis(cumylphenoxy)phthalocyanines, **159**, 369
new asymmetric substitution of phthalocyanines: derivatives designed for deposition as Langmuir–Blodgett films, **159**, 469
optical and electrical properties of deposited films of Si(phthalocyaninato) $(OH)_2$, **157**, 189
structural studies of intermolecular interactions in pure and diluted films of a redox-active phthalocyanine, **159**, 83
surface plasmon resonance studies of gas effects in phthalocyanine Langmuir–Blodgett films, **160**, 431

Plasma deposition
chemical composition of native sulphides formed on InP by indirect plasma, **162**, 223
a comparative study of silicon deposition from $SiCl_4$ in cold plasma using argon, H_2 or Ar $+H_2$, **156**, 79
conducting luminescent ZnS films formed by plasma-assisted metal–organic chemical vapour deposition, **162**, 263
effect of mixing oxygen or diborane on the formation of amorphous carbon films from methane by r.f. plasma chemical vapour deposition, **163**, 229
fabrication of transition metal nitride films using a shock wave plasma, **163**, 233
high rate jet plasma-assisted chemical vapour deposition, **158**, 265
influence of temperature on the growth of TiN films by plasma-assisted chemical vapour deposition, **161**, L87
investigation of plasma-grown planar alumina films for use in the modelling of bulk alumina, **155**, 133
medium optical index material tailoring by plasma-enhanced chemical vapour deposition, **164**, 375
photovoltaic properties of thin films of plasma-polymerized acrylonitrile, **162**, 333
plasma-assisted chemical vapour deposition of TiN and TiC on steel: properties of coatings, **165**, 139
plasma-assisted deposition techniques and synthesis of novel materials, **163**, 131
plasma deposition of amorphous hydrogenated carbon films on III–V semiconductors, **157**, 97
regularities of growth and electrical properties in the plasma-enhanced deposition of silicon nitride, **157**, 337

Platinum
characterization of ultrathin platinum overlayers deposited on a W(110) surface, **163**, 393
dependence of PtSi Schottky diode electrical behaviour on the platinum film thickness and on the annealing process, **161**, 13
electrical characteristics of PtSi formed by incoherent light annealing, **164**, 487
the oxidation of PtSi, Pt_2Si and polycrystalline silicon in ultrahigh vacuum residual gas, **158**, 61

Polar groups
hydrated polar groups in lipid monolayers: effective local dipole moments and dielectric properties, **159**, 73

Polarization
the polarizability of truncated spheres and oblate spheroids on a substrate: comparison with experimental results, **164**, 57
polarization processes in pyroelectric Langmuir–Blodgett films, **160**, 117

Polymerization
interdependence between crystallization and polymerization in diacetylene monolayers, **159**, 63
polymerizabilities of amphiphilic monomers with controlled arrangements in Langmuir–Blodgett films, **160**, 43

Polymers
bleaching of exciton transition in Langmuir–Blodgett films of polydiacetylene, **160**, 373
the characterization of Langmuir–Blodgett films of a non-linear optical, side chain liquid crystalline polymer, **161**, 315
characterization of monolayer and bilayer (polymer/monolayer) structures for their use as a lubricant, **160**, 453
comparison of the electrical properties of polyimide films containing surface metal oxide: cobalt oxide *vs.* tin oxide, **158**, 189

the effects of thickness on the electrical conduction of thin poly(1-trimethylsylil-1-propyne) films, **165**, 337
electromechanical properties of thin Vo_2 films on polyimide substrates, **158**, L49
a few electronic properties of thin films on plasma-polymerized acrylonitrile, **161**, 187
heat-stable aromatic polymer precursors as Langmuir–Blodgett film materials, **160**, 21
intermixing of Co/Gd_xO_y thin films on kapton polyimide, **157**, 223
Langmuir–Blodgett films of acetalized poly(vinyl alcohol)s, **161**, 305
microstructural study of carbon black–polyimide thick films, **162**, 279
near-edge X-ray absorption fine structure studies of oriented molecular chains in polyethylene and Langmuir–Blodgett monolayers on Si(111), **159**, 275
non-conducting polyphenylene oxide electrogeneration on mild steel by different electrochemical methods, **162**, 209
optical properties of Langmuir–Blodgett polydiacetylene thin films, **160**, 327
photoconductivity studies of indium/epindolidione/indium tin oxide sandwich cells, **158**, 175
photovoltaic properties of thin films of plasma-polymerized acrylonitrile, **162**, 333
polymer–ceramic composite materials with high dielectric constants, **158**, 93
polyurethane coatings for integrated optics applications, **161**, L79
preparation and characterization of poly(amide–imide) multilayer films, **160**, 15
preparation and characterization of monolayers and multilayers of preformed polymers, **159**, 221
second-harmonic generation in Langmuir–Blodgett films of hemicyanine–poly(octadecyl methacrylate) and hemicyanine–behanic acid, **160**, 379
solid lubricating fluorine-containing polymer film synthesized by perfluoropolyether sputtering, **158**, 51
a study of the adhesion of vacuum-evaporated polyethylene films to aluminium, **157**, 43
switching behaviour of plasma-polymerized thin polyfuran films, **164**, 353
synthesis of electrically conductive polypyrroles at the air–water interface of a Langmuir–Blodgett film balance, **160**, 187

Porosity
electrochemical method to evaluate the connected porosity in ceramic coatings, **156**, 315
investigation of the porosity of thin anodic Al_2O_3 films by interference of photoluminescence radiation, **157**, 59

Porphyrins
energy transfer and aggregation in monolayers containing porphyrins and phthalocyanines, **159**, 115
orientational studies of Langmuir–Blodgett films of porphyrins with polarized resonant Raman spectroscopy, **159**, 315
structural and electrical studies of alternating layers of porphyrins and fatty acids, **160**, 99

Positrons
positron lifetime study of vacancy defects in non-stoichiometric TiN_x and TiC_x films, **163**, 49

Potassium
electrical properties of ferroelectric thin film KNO_3 memory devices, **164**, 339

Pressure stability
pressure stability in reactive magnetron sputtering, **158**, 141

Process parameters
correlation of process and system parameters with structure and properties of physically vapour-deposited hard coatings, **157**, 195

Purple membrane
photovoltaic properties of purple membrane Langmuir–Blodgett films, **160**, 145

Pyrene
electron transfer quenching of excited pyrene or Ru(II) $(bpy)^+$ derivatives in Langmuir–Blodgett films by donor or acceptor molecules with different redox potentials, **160**, 317

Pyroelectric properties
Fourier transform IR studies of alternate layer acid–amine Langmuir–Blodgett films with pyroelectric properties, **159**, 461
IR studies of pyroelectric Langmuir–Blodgett films, **155**, 187
polarization processes in pyroelectric Langmuir–Blodgett films, **160**, 117

Pyrroles
synthesis of electrically conductive polypyrroles at the air–water interface of a Langmuir–Blodgett film balance, **160**, 187

Q

Quantum wells
a novel matrix approach for solving the multiple quantum well problem, **163**, 461

R

Radiative recombination

research on radiative recombination centre formation in photoconductive cadmium sulphide and selenide films, **162**, 67
Raman scattering
Raman scattering analysis of disorder in heterogeneous $(GaAs)_{1-x}(SiC_2{:}H)_x$ films grown by metal–organic chemical vapour deposition, **155**, 331
Raman spectroscopy
Fourier transform Raman spectroscopy of thin films, **160**, 311
molecular recognition in monolayers and species detection by surface-enhanced resonance Raman spectroscopy, **160**, 389
orientational studies of Langmuir–Blodgett films of porphyrins with polarized resonant Raman spectroscopy, **159**, 315
Rare earth elements
ellipsometric comparisons of rare earth–transition metal alloy films in connection with magneto-optical recording, **162**, 89
Reactions
amorphous alloy formation by solid state reaction, **163**, 43
a comparison between amorphous Ni–Zr alloys formed by solid state reaction and by co-deposition, **164**, 199
interfacial reactions of palladium thin films on Ge(111) and Ge(001), **162**, 295
kinetics and mechanism of reaction at room temperature in thin Au/metal couples, **156**, 105
reactions of Co/Mo bilayers and amorphous $Co_{50}MO_{50}$ alloy films with silicon substrates, **162**, 199
Recording films
magnetization reversal model for vertical recording films, **158**, 7
Redox potentials
electron transfer quenching of excited pyrene or Ru(II) $(bpy)^+$ derivatives in Langmuir–Blodgett films by donor or acceptor molecules with different redox potentials, **160**, 317
Reflectance
variations in the reflectance of TiN, ZrN and HfN, **157**, 255
Reflection
an original device for measuring reflection factors of a thick metallic film in polarized light, **165**, 211
theory of light reflection from a substrate sparsely seeded with spheres: comparison with an ellipsometric experiment, **164**, 63
Reflectometry
optical analysis of inhomogeneous weakly absorbing thin films by spectroscopic reflectometry: application to carbon films, **162**, 101
reflectometry measurement of optical parameters of $Au/SiO_2/Si$ films, **156**, 11
Resistive films
effects of substrate thermal expansion coefficient on the physical and electrical properties of thick film resistors, **162**, 7
investigation of sliding contact resistance of Ni–Cr/Au and Ni–Cr/Au–SiO_2 thin resistive films, **164**, 129
preparation and properties of resistive films, **157**, 21
Resists
drawing fine patterns on *N*-octadecylacrylamide Langmuir–Blodgett multilayers: a new class of ultrathin resists, **155**, L11
Rhenium
optical and electrical properties of semiconducting rhenium disilicide thin films, **162**, 29
some properties of $ReSi_2$, **161**, 197
Rheology
surface rheology of spread monolayers, **159**, 171
Richardson plot
a new Richardson plot for non-ideal Schottky diodes, **161**, 93
Roughness
quantitative interface roughness studies of copper oxide on copper, **164**, 5
Rubidium
thin film solid state cells using $Rb_4Cu_{16}I_7Cl_{13}$ electrolyte and their limitations, **164**, 345
Ruthenium
the oxygen electrode reaction in acid solutions on RuO_2 electrodes prepared by the thermal decomposition method, **163**, 301
Rutherford backscattering
a comparative Rutherford backscattering spectrometry and Auger electron spectroscopy depth profile study of Fe–N films, **161**, L69
a comparative study of thin film diffusion measurements in metallic glasses by Rutherford backscattering spectrometry and Auger electron spectroscopy, **164**, 33

S

Scanning tunnelling microscopy
scanning tunnelling microscopy of thin organic films, **159**, 293
Schottky barriers
Fermi level pinning and chemical interactions at metal/metal organic CVD grown GaAs inter-

faces: Schottky barrier height, **164**, 21
Schottky diodes
dependence of PtSi Schottky diode electrical behaviour on the platinum film thickness and on the annealing process, **161**, 13
a new Richardson plot for non-ideal Schottky diodes, **161**, 93
Scratch test
adhesion measurement of non-metallic thin films using a scratch method, **163**, 67
Second-harmonic generation
a comparison of second-harmonic generation and electro-optic studies of Langmuir–Blodgett monolayers of new hemicyanine dyes, **156**, 39
second-harmonic generation in alternate non-linear Langmuir–Blodgett films, **160**, 217
second-harmonic generation in Langmuir–Blodgett films of hemicyanine–poly(octadecyl methacrylate) and hemicyanine–behanic acid, **160**, 379
Segregation
study of surface segregation of simultaneously evaporated Mn–Ag alloy films by means of ion scattering spectroscopy and Auger electron spectroscopy, **164**, 37
Selective coatings
black nickel–cobalt: selective coatings prepared by a conversion process, **156**, 93
reply to comments on "Spectrally selective surfaces on stainless steel produced by chemical conversion", **155**, L15
Selective deposition
selective deposition of thin films by substrate argon ion bombardment, **164**, 475
Selenium
amorphous PbSe films: growth and properties, **165**, 303
characterization of $MoSe_2$ thin films, **158**, 285
characterization of p-$CuInSe_2$ films for photovoltaics grown by a chemical deposition technique, **164**, 269
conduction processes in inhomogeneous $CdSe_xTe_{1-x}$ semiconductors, **158**, 25
$CuInSe_2$ films for photovoltaics and photoelectrochemistry, **163**, 167
determination of $CuInSe_2$ thin film compositions by controlled-potential coulometry, **155**, 317
the effect of light intensity and temperature on the transient photoconductivity in thin a-$Se_{80}Te_{20}$ films, **165**, 99
the effect of In_2O_3 on the electrical and structural properties of $CuInSe_2$ prepared by chemical spray pyrolysis, **159**, L53
electrodeposition of $CuInSe_2$ films from a sulphate bath, **157**, 159
experimental electronic density of states of tin selenide measured on thin films, **164**, 69
fabrication and crystallophysical properties of $(ZnSe)_x(CdTe)_{1-x}$ $(x = 0–1)$ multicomponent system films, **162**, 257
formation of InSe and GaSe deposited films and their electrical properties, **156**, 145
formation of stoichiometric InSe compound films, **164**, 207
quaternary equilibrium phase diagram for copper, indium, selenium and oxygen, **158**, 133
research on radiative recombination centre formation in photoconductive cadmium sulphide and selenide films, **162**, 67
study of microstructure of amorphous Ge-Se films using spectroscopic ellipsometry, **164**, 51
study of the properties of thin films of hexagonal selenium doped with chlorine, **157**, 291
superlattice $ZnS_xSe_{1-x}/ZnS_ySe_{1-y}$ on (100) GaAs obtained by a photoassistant metal–organic chemical vapour deposition method, **163**, 475
uniform composition Te–Se film preparation from alloy sources, **157**, 307
X-ray characterization of epitaxially grown dilute magnetic semiconductors $Zn_{1-x}Fe_xSe$ $(0 < x < 0.22)$, **164**, 111
X-ray line profile analysis studies on SnSe thin films deposited at different substrate temperatures, **165**, 257
Semiconductors
characterization of thin films and materials used in semiconductor technology by spectroscopic ellipsometry, **164**, 43
kinetic aspects of thin film formation of ternary semiconductors, **163**, 297
metal film barriers against the evaporation of volatile components during the heat treatment of metal–compound semiconductor contacts, **164**, 1
properties of sputtered nitride semiconductors, **164**, 441
thermal diffusivity measurement of micron-thick semiconductor films by mirage detection, **155**, 165
X-ray characterization of epitaxially grown dilute magnetic semiconductors $Zn_{1-x}Fe_xSe$ $(0 < x < 0.22)$, **164**, 111
Sensitizers
molecular photodiodes consisting of unidirectionally oriented amphipathic acceptor–sensitizer–donor triads, **160**, 125

Sensors
enzyme-immobilized Langmuir–Blodgett film for a biosensor, **160**, 463
Langmuir–Blodgett films as chemical sensors, **160**, 413
an optical chemical sensor using a fluorophor-embedded Langmuir–Blodgett film, **160**, 477
silicon thin films for optoelectronic temperature sensors, **158**, 1
study of sputtered ZnO–Pd thin films as solid state H_2 and NH_3 gas sensors, **157**, 169
surface acoustic wave sensors incorporating Langmuir–Blodgett films, **160**, 445
Shock waves
fabrication of transition metal nitride films using a shock wave plasma, **163**, 233
formation of thin films by shock wave deposition method, **163**, 261
Silicon
capacitance–voltage properties of thin Ta_2O_5 films on silicon, **156**, 207
change in water vapour adsorption kinetics in chemically vapour deposited SiO_2 films after ion irradiation, **161**, 343
characterization of microcrystalline silicon films prepared by the glow discharge method under different conditions, **156**, 277
characterization of microcrystallinity in hydrogenated silicon thin films, **155**, 227
CO_2-laser-induced chemical vapour deposition of polycrystalline silicon from silane, **155**, 75
a comparative study of silicon deposition from $SiCl_4$ in cold plasma using argon, H_2 or $Ar+H_2$, **156**, 79
correlation between stress and structure in chemically vapour-deposited silicon nitride films, **162**, 129
correlation between morphology, optical losses and laser damage of MgF_2–SiO_2 multilayers, **156**, 1
deep core level electron energy loss studies on a silicon surface using slow electron energy loss spectroscopy, **164**, 27
density of states in a-Si:H,Cl determined by space-charge-limited currents, **158**, 217
dependence of PtSi Schottky diode electrical behaviour on the platinum film thickness and on the annealing process, **161**, 13
deposition mechanism of hydrogenated amorphous Si–Ge films, **163**, 123
deposition of Si_xC_{1-x}:H films by reactive r.f. sputtering, **155**, 39
depth profile measurements of aluminium film on phosphorus-doped hydrogenated amorphous silicon layers by Auger electron spectroscopy, **155**, 325
direct UV photoenhanced chemical vapur deposition of a-Si:H from disilane using a deuterium lamp, **163**, 237
effect of excess silicon on behaviour of LPCVD WSi_x films on silicon, **163**, 267
effect of mixing ions on the formation process of β-SiC fabricated by ion beam mixing, **157**, 117
effect of n^+-polycrystalline silicon rapid thermal annealing on the electrical properties of the gate oxide, **162**, 21
effect of Si_3N_4 encapsulation on the thermal processing of hydrogenated amorphous silicon, **161**, 181
effect of a temperature gradient on arsenic diffusion in silicon, **157**, 49
the effects of deposition variables on deposition rate in the chemical vapour deposition of silicon nitride, **155**, 87
effects of a silicon substrate on surface plasmon spectra in silver island films, **155**, L1
electrical characteristics of PtSi formed by incoherent light annealing, **164**, 487
electrical properties of plasma-deposited fluorinated silicon nitride, **162**, 59
electrical properties of Ti–Si–N thin cermet films deposited in a triode sputtering system with a hot cathode, **162**, 111
the growth of polycrystalline silicon films by low pressure chemical vapour deposition at relatively low temperatures, **163**, 249
growth kinetics of thin anodic oxides of silicon and its dependence on phosphorus concentration in silicon, **163**, 373
growth and properties of glow-discharge hydrogenated amorphous silicon–carbon alloys from silane–propane mixtures, **164**, 221
high-dose carbon ion implantation studies in silicon, **163**, 323
high pressure oxidation of Si(100) for production of ultrathin oxide metal/insulator/semiconductor diodes, **156**, 243
high temperature stability of plasma-enhanced chemically vapour-deposited titanium silicide due to two-step rapid thermal annealing, **157**, 135
hydrogenated amorphous Si–C alloy prepared by chemical vapour deposition, **164**, 213
implantation damage control of silicon indiffusion during rapid thermal annealing of InP using AlN/Si_3N_4 as an encapsulant, **162**, 49
ion channeling analysis of MBE grown

$Si_{1-x}Ge_x$/Si strained layer superlattices, **163**, 455
in situ electrical property measurements of metal/(plasma polysiloxane)/metal structures, **155**, 175
an interesting unconventional photoinduced change in the dark conductivity of a-Si:F:H, **164**, 217
IR spectroscopy of a-$Si_{1-x}Sn_x$:H films, **164**, 243
IR transmittance studies of hydrogen-free and hydrogenated silicon nitride and silicon oxynitride films deposited by reactive sputtering, **155**, 301
kinetics of grain growth in doped polycrystalline silicon thin films, **163**, 383
laser-induced chemical vapour deposition and characterization of amorphous silicon oxide films, **157**, 105
light-induced changes in magnetron-sputtered hydrogenated amorphous silicon films, **164**, 227
measurement of the adhesion of silver films to oxidized silicon, **164**, 153
mechanical stresses in low pressure chemically vapour-deposited silicon films, **165**, 181
the metastable C49 structure in sputtered $TiSi_2$ thin films, **158**, 255
modelling of ^{18}O tracer studies of the oxygen redistribution during formation of SiO_2 layers by high dose implantation, **161**, 333
molybdenum disilicide formation by ion beam mixing and rapid thermal annealing of Mo/Si(111), **164**, 449
near-edge X-ray absorption fine structure studies of oriented molecular chains in polyethylene and Langmuir–Blodgett monolayers on Si(111), **159**, 275
some new results on the electronic properties of a-Si and a-SiN_x, **163**, 85
optical absorption of ion-implanted amorphous silicon, **163**, 331
optical and electrical properties of deposited films of Si(phthalocyaninato) $(OH)_2$, **157**, 189
optical and electrical properties of semiconducting rhenium disilicide thin films, **162**, 29
organometallic chemical vapour phase deposition of "Mn_2Si", **156**, 327
the oxidation of PtSi, Pt_2Si and polycrystalline silicon in ultrahigh vacuum residual gas, **158**, 61
partial epitaxial growth of $NbSi_2$ on Si(111), **161**, 263
patterned photoassisted organometallic deposition of iron, nickel and palladium on silicon, **156**, L31
physico-chemical properties of photo-CVD silicon nitride thin films, **165**, 279
plasma-enhanced chemical vapour deposition of silicon nitride for microelectronic applications, **164**, 309
properties of polycrystalline silicon grown on insulating substrates by electron beam gun evaporation, **155**, 97
some properties of $ReSi_2$, **161**, 197
Raman scattering analysis of disorder in heterogeneous $(GaAs)_{1-x}(SiC_2:H)_x$ films grown by metal–organic chemical vapour deposition, **155**, 331
rapid thermal annealing of arsenic-implanted silicon: a review, **165**, 109
reactions of Co/Mo bilayers and amorphous $Co_{50}Mo_{50}$ alloy films with silicon substrates, **162**, 199
reflectometry measurement of optical parameters of Au/SiO_2/Si films, **156**, 11
regularities of growth and electrical properties in the plasma-enhanced deposition of silicon nitride, **157**, 337
silicide formation, **163**, 111
silicide formation from ternary metal–metal–silicon systems, **156**, 351
silicon dioxide films prepared by spin-on solutions, **157**, 129
silicon thin films for optoelectronic temperature sensors, **158**, 1
simple method of spectroscopic reflectometry for the complete optical analysis of weakly absorbing thin films: application to silicon films, **156**, 181
sputter deposition of thin tantalum layers and low temperature interactions Ta/SiO_2 and Ta/Si, **165**, 227
stability of dangling bonds in amorphous hydrogenated silicon, **164**, 239
stress effect in junctions of n-type microcrystalline Si:H with p-type silicon, **164**, 321
stresses in thin polycrystalline silicon films, **162**, 365
studies of some properties of mechanical stress in a-Si:H, a-SiN_x:H and a-Si:H/a-SiN_x:H heterojunction films, **165**, 173
synthesis of buried silicon nitride layers by rapid thermal annealing, **164**, 429
thin film interaction of aluminium and hafnium: influence of copper and silicon, **161**, 235
TiC and TiN coatings formed on Si_3N_4–TiC composite ceramics by chemical vapour deposition, **165**, 149

time-resolved study of thin nickel silicide layer growth at the nickel film–Si(100) interface, **164**, 481
treatment of WTi contacts on silicon with low energy argon ions, **164**, 493
X-ray photoelectron spectroscopy of O 1s and Si 2p lines in films of SiO_x formed by electron beam evaporation, **157**, 351
Silver
a comparative study of silver photodoping in chalcogenide films by means of extended X-ray absorption fine structure and kinetics measurements, **164**, 467
effects of a silicon substrate on surface plasmon spectra in silver island films, **155**, L1
exposure characteristics of electron-beam-induced silver doping and its application to grating device fabrication in chalcogenide glass films, **165**, 55
interfacial reactions in bimetallic Ag–Sn thin film couples, **155**, 243
interpretation of attenuated total reflection changes induced by a submonolayer of caesium adatoms on silver films, **156**, 21
ion beam mixing of silver–magnesium oxide multilayers, **165**, 347
measurement of the adhesion of silver films to oxidized silicon, **164**, 153
morphology and structure of gold, silver and copper layers obtained by sputtering during ion bombardment of targets from these metals, **157**, 315
photovoltaic study of anodically grown oxide films on Ag–Cu alloys, **161**, 207
study of surface segregation of simultaneously evaporated Mn–Ag alloy films by means of ion scattering spectroscopy and Auger electron spectroscopy, **164**, 37
the temperature dependence of electron emission from a discontinuous carbon film device between silver film electrodes, **158**, 207
the temperature dependence of superlattice spots in electron diffraction patterns of thin layers of Ag_xTiS_2 formed by electrointercalation, **164**, 81
time variation of the interisland spacing at liquid nitrogen temperature for copper and silver island films, **159**, L61
Single crystals
the crystalline structure of two-dimensional cyanine dye single crystals as revealed by electron diffraction, **160**, 251
Size quantization
size-dependent quantum and classical transport in metallic thin films, **164**, 141
Sol–gel process
vanadium dioxide films grown from vanadium tetraisopropoxide by the sol–gel process, **165**, 317
Solar cells
current status of thin film solar cell research at SERI, **163**, 75
HgCdTe thin films for solar cells application prepared by multisource evaporation, **157**, 175
Solution growth
a solution growth technique for the deposition of manganese sulphide thin film, **158**, 271
Space-charge-limited currents
density of states in a-Si:H,Cl determined by space-charge-limited currents, **158**, 217
Spectroscopic studies
linear and non-linear optical and spectroscopic properties of Langmuir–Blodgett films, **160**, 197
simple method of spectroscopic reflectometry for the complete optical analysis of weakly absorbing thin films: application to silicon films, **156**, 181
Spheres
the polarizability of truncated spheres and oblate spheroids on a substrate: comparison with experimental results, **164**, 57
theory of light reflection from a substrate sparsely seeded with spheres: comparison with an ellipsometric experiment, **164**, 63
Spin transition
spin transition in a magnetic Langmuir–Blodgett film, **160**, 107
Spin-on solutions
silicon dioxide films prepared by spin-on solutions, **157**, 129
Spiropyran
controls of photochromic reactions in spiropyran Langmuir–Blodgett films, **160**, 279
UV-light-assisted vacuum deposition of spiropyran compounds, **162**, 343
Spraying
evaluation of the wet erosion resistance of sprayed coatings, **162**, 145
mechanics of film formation during the spray pyrolysis of tin oxide, **165**, 265
simultaneous measurement of coating thickness and deposition stress during thermal spraying, **164**, 157
spray deposition of $TbCl_3$-doped In_2O_3 photoluminescent films, **165**, 249
structural properties of SnO_2:F films deposited by spray pyrolysis technique, **164**, 261

Sputtering
the deposition and film properties of reactively sputtered titanium nitride, **161**, 289
deposition of Si_xC_{1-x}:H films by reactive r.f. sputtering, **155**, 39
deposition of TiB_2 films by a co-sputtering method, **156**, 287
the effect of stoichiometry on sputtering, deuterium retention and surface damage in titanium carbide films, **156**, 231
fabrication of superlattice structures by plasma controlled magnetron sputtering, **163**, 467
ion beam sputter deposition of low loss Al_2O_3 films for integrated optics, **165**, 1
morphology and structure of gold, silver and copper layers obtained by sputtering during ion bombardment of targets from these metals, **157**, 315
preparation of W–C thin films by reactive r.f. sputtering and Auger electron spectroscopy surface characterization, **161**, L91
pressure stability in reactive magnetron sputtering, **158**, 141
sputter deposition of thin tantalum layers and low temperature interactions Ta/SiO_2 and Ta/Si, **165**, 227
structure of TiN coatings deposited at relatively high rates and low temperatures by magnetron sputtering, **156**, 53
Squarylium
multipiled monolayer assembly of J-aggregates of squarylium dye with short alkyl chains, **159**, 337
the spontaneous formation of J-like aggregate in Langmuir–Blodgett films of a squarylium dye, **160**, 299
Staebler–Wronski effect
r.f. power dependence of the Staebler–Wronski effect, **164**, 233
Stark spectroscopy
stark spectroscopy of Langmuir–Blodgett monolayers and multilayers, **160**, 271
Steels
characterization of thin iron phosphate films on cold-rolled steel surfaces by transmission electron microscopy and electron diffraction, **162**, 183
mechanical properties of r.f. magnetron-sputtered W–C films on stainless steel, **161**, 107
microstructure and tribological property correlations of ion-implanted bearing steels, **163**, 365
non-conducting polyphenylene oxide electrogeneration on mild steel by different electrochemical methods, **162**, 209
plasma-assisted chemical vapour deposition of TiN and TiC on steel: properties of coatings, **165**, 139
reply to comments on "Spectrally selective surfaces on stainless steel produced by chemical conversion", **155**, L15
surface modification in nitrogen-ion-implanted stainless steel, **163**, 359
X-ray diffraction study of phase composition and amorphization in magnetron-sputter-deposited thin films of stainless steel–titanium, **161**, 223
Stilbazolium
third-order hyperpolarizability of centrosymmetric Langmuir–Blodgett films of stilbazolium dyes, **160**, 209
Stoichiometry
the effect of stoichiometry on sputtering, deuterium retention and surface damage in titanium carbide films, **156**, 231
Stress
correlation between stress and structure in chemically vapour-deposited silicon nitride films, **162**, 129
internal stress and adhesion of r.f.-sputtered MgO films on glass substrates, **164**, 169
mechanical stresses in low pressure chemically vapour-deposited silicon films, **165**, 181
simultaneous measurement of coating thickness and deposition stress during thermal spraying, **164**, 157
stress effect in junctions of n-type microcrystalline Si:H with p-type silicon, **164**, 321
stresses in thin polycrystalline silicon films, **162**, 365
studies of some properties of mechanical stress in a-Si:H, a-SiN_x:H and a-Si:H/a-SiN_x:H heterojunction films, **165**, 173
Strontium
characterization of SrF_2 thin films and of SrF_2/InP structures, **158**, 81
Structure
columnar structure of obliquely deposited iron films prepared at low substrate temperatures, **158**, 239
columnar and textural structures in obliquely deposited iron films, **163**, 379
control of structure in Langmuir–Blodgett films of terphenyl liquid crystal compounds, **159**, 345
correlation between stress and structure in chemically vapour-deposited silicon nitride films, **162**, 129
the crystalline structure of two-dimensional

cyanine dye single crystals as revealed by electron diffraction, **160**, 251
dependence of microstructure of TiN coatings on their thickness, **158**, 225
effect of deposition rate on structure and properties of As_2S_3 film, **161**, 139
the effect of In_2O_3 on the electrical and structural properties of $CuInSe_2$ prepared by chemical spray pyrolysis, **159**, L53
electrical and structural properties of concentrated Cr(Al) thin films, **165**, 11
the metastable C49 structure in sputtered $TiSi_2$ thin films, **158**, 255
microstructural, optical and electrical studies of sputtered epitaxial CdTe films, **163**, 409
microstructural study of carbon black–polyimide thick films, **162**, 279
microstructure and optical properties of mixed monolayers containing a J-band forming cyanine dye and various cosurfactants, **159**, 379
microstructure and tribological property correlations of ion-implanted bearing steels, **163**, 365
morphology and structure of gold, silver and copper layers obtained by sputtering during ion bombardment of targets from these metals, **157**, 315
structural studies of intermolecular interactions in pure and diluted films of a redox-active phthalocyanine, **159**, 83
structural characterization of thin films of cadmium telluride, **164**, 85
structural and electrical studies of alternating layers of porphyrins and fatty acids, **160**, 99
structural, optical and electrical properties of evaporated and sputtered Au–Cr thin films, **165**, 29
structural properties of SnO_2:F films deposited by spray pyrolysis technique, **164**, 261
structure and dynamics of deposited lipid monolayers: low energy electron diffraction and scattering of thermal energy helium atoms, **159**, 429
structure and dynamics in a Langmuir–Blodgett film at elevated temperatures, **159**, 359
structure, optical and electro-optical properties of polycrystalline WO_3 and MoO_3 thin films prepared by chemical vapour deposition, **164**, 333
structure and properties of strained compositionally modulated Cu–Ni and Pd–Ni films, **163**, 491
structure of reactively sputtered chromium–carbon films, **156**, 307
structure and temperature dependence of fatty acid Langmuir–Blodgett films studied by neutron and X-ray scattering, **159**, 253
study of microstructure of amorphous Ge–Se films using spectroscopic ellipsometry, **164**, 51
surface structure investigation of Langmuir–Blodgett films, **159**, 301
variations in structural and electrical properties of magnetron-sputtered indium tin oxide films with deposition parameters, **162**, 119

Substrates
the influence of the physicochemical characteristics of the substrate surface on the deposited TiN film properties, **163**, 309
interaction of metal clusters with substrate steps, **163**, 291
the role and structure of microclusters in metal deposition onto weak-bonding substrates, **163**, 285

Sulphur
chemical composition of native sulphides formed on InP by indirect plasma, **162**, 223
conducting luminescent ZnS films formed by plasma-assisted metal–organic chemical vapour deposition, **162**, 263
effect of bath temperature on the optoelectronic characteristics of chemically deposited CdS thin films, **161**, 21
effect of deposition rate on structure and properties of As_2S_3 film, **161**, 139
the effects of temperature and bias illumination on the spectral sensitivity of CdS–Cu_xS heterojunctions, **164**, 313
kinetic properties and energy transfer in the electroluminescence of thin film cells based on ZnS:Mn, **161**, 59
light intensity dependence of photodarkening in amorphous As_2S_3 films, **157**, 35
low-voltage-driven a.c. thin film electroluminescent cell containing a ZnS:Mn film deposited by molecular beam epitaxy, **162**, 73
low-voltage-driven ZnS:Mn thin film electroluminescent devices using insulating dielectric ceramic sheets, **164**, 363
photoelectrical properties of H^+-implanted CdS thin films, **156**, L21
preparation and study of sulphide thin films deposited by the dip technique, **155**, 309
research on radiative recombination centre formation in photoconductive cadmium sulphide and selenide films, **162**, 67
a solution growth technique for the deposition of manganese sulphide thin film, **158**, 271
superlattice $ZnS_xSe_{1-x}/ZnS_ySe_{1-y}$ on (100)

GaAs obtained by a photoassistant metal–organic chemical vapour deposition method, **163**, 475
the temperature dependence of superlattice spots in electron diffraction patterns of thin layers of Ag_xTiS_2 formed by electrointercalation, **164**, 81
thermally stimulated currents in thin amorphous GeS films, **155**, L5
vapour-deposited superconducting lanthanum sulphide films, **156**, 271
X-ray emission spectroscopy study of substoichiometric $Bi_{2-x}Sb_xS_3$ system, **164**, 75
Superconductors
high temperature superconductors in electronics, **163**, 181
screen-printed superconducting films of Y–Ba–Cu–O, **158**, L45
structural and electrical properties of screen-printed thick films of $YBa_2Cu_3O_{7-x}$ superconductors, **164**, 115
superconductivity behaviour in screen-printed $YBa_2Cu_3O_7$ films, **164**, 119
vapour-deposited superconducting lanthanum sulphide films, **156**, 271
Superlattices
dipole–dipole interaction in the diffused interlayer of magnetic superlattices, **161**, L83
electron spin resonance studies on the superlattices PbTe–$Pb_{1-x}Eu_xTe$ prepared by hot wall epitaxy, **161**, 149
fabrication of superlattice structures by plasma-controlled magnetron sputtering, **163**, 467
ion channelling analysis of MBE grown $Si_{1-x}Ge_x$/Si strained layer superlattices, **163**, 455
molecular beam epitaxy of AlAs/GaAs heterostructures and superlattices, **163**, 1
superlattice $ZnS_xSe_{1-x}/ZnS_ySe_{1-y}$ on (100) GaAs obtained by a photoassistant metal–organic chemical vapour deposition method, **163**, 475
Surface acoustic waves
surface acoustic wave sensors incorporating Langmuir–Blodgett films, **160**, 445
Surface damage
the effect of stoichiometry on sputtering, deuterium retention and surface damage in titanium carbide films, **156**, 231
Surface modification
application of spectroscopic ellipsometry to study the effect of surface treatments on cadmium telluride films, **164**, 265
rapid modification of thin films by a large-area electron beam, **163**, 349
surface modification in nitrogen-ion-implanted stainless steel, **163**, 359
Surface plasmon studies
effects of a silicon substrate on surface plasmon spectra in silver island films, **155**, L1
plasmon surface polariton fields for the characterization of thin films, **159**, 323
surface plasmon resonance studies of gas effects in phthalocyanine Langmuir–Blodgett films, **160**, 431
Surface pressure
formation of organic heterostructures into p–n heterojunctions by surface pressure control, **160**, 165
surface pressure dependence of molecular tilt in Langmuir–Blodgett films of 22-tricosenoic acid, **161**, 325
Surface processes
a thermal spike analysis of low energy ion-activated surface processes, **165**, 359
Surface properties
preparation of W–C thin films by reactive r.f. sputtering and Auger electron spectroscopy surface characterization, **161**, L91
surface properties of a long-chain 10:12 diynoic acid monolayer at air–liquid and solid–liquid interfaces, **155**, 255
surface rheology of spread monolayers, **159**, 171
surface structure investigation of Langmuir–Blodgett films, **159**, 301
Switching
switching behaviour of plasma-polymerized thin polyfuran films, **164**, 353
System parameters
correlation of process and system parameters with structure and properties of physically vapour-deposited hard coatings, **157**, 195

T

Tangent rule
comment on the tangent rule, **163**, 387
Tantalum
application of tantalum based thin film devices in active matrix addressed liquid crystal displays, **164**, 327
capacitance–voltage properties of thin Ta_2O_5 films on silicon, **156**, 207
characterization of reactively r.f.-sputtered tantalum oxide films, **162**, 325
sputter deposition of thin tantalum layers and low temperature interactions Ta/SiO_2 and Ta/Si, **165**, 227
TCNQ
electron spin resonance study of Langmuir–

Blodgett films of *N*-docosylpyridinium-di(tetracyanoquinodimethane), **160**, 139
hall effect in conducting Langmuir–Blodgett films of a ternary tetracyanoquinodimethane salt, **161**, L73
highly conducting Langmuir–Blodgett films of the TMTTF-CnTCNQ system, **160**, 61
a novel highly conducting phosphonium tetracyanoquinodimethane Langmuir–Blodgett film, **160**, 81
the properties of conducting tetracyanoquinodimethane Langmuir–Blodgett films: a study using acoustoelectric devices, **160**, 53
Tellurium
application of spectroscopic ellipsometry to study the effect of surface treatments on cadmium telluride films, **164**, 265
characterization of chemically modified CdTe surfaces, **164**, 13
conduction processes in inhomogeneous $CdSe_xTe_{1-x}$ semiconductors, **158**, 25
d.c. electrical properties of evaporated thin films of CdTe, **164**, 281
dislocations in epitaxial $Cd_{0.9}Mn_{0.1}Te$ films, **159**, L65
the effect of light intensity and temperature on the transient photoconductivity in thin a-$Se_{80}Te_{20}$ films, **165**, 99
electron spin resonance studies on the superlattices PbTe–$Pb_{1-x}Eu_xTe$ prepared by hot wall epitaxy, **161**, 149
fabrication and crystallophysical properties of $(ZnSe)_x(CdTe)_{1-x}$ $(x = 0–1)$ multicomponent system films, **162**, 257
growth and characterization of indium telluride thin films, **157**, 345
growth of $Pb_{0.82}Sn_{0.18}Te$ by molecular beam epitaxy, **161**, 171
HgCdTe thin films for solar cells application prepared by multisource evaporation, **157**, 175
high capability, quasi-closed growth system for isothermal vapour phase epitaxy of (Hg, Cd)Te, **161**, 157
microstructural, optical and electrical studies of sputtered epitaxial CdTe films, **163**, 409
a novel electroplating technique for cadmium telluride films in non-aqueous medium, **164**, 255
optical constants of $Cd_{1-y}Mn_yTe$ thin films, **165**, 91
optical properties of as-grown and reduced TeO_2 films, **161**, 101
optical properties and dielectric function of manganese telluride thin films, **157**, 1
photovoltaic properties of ZnO/p-CdTe thin film heterojunctions, **164**, 295
preparation of ZnTe thin films using a simple two-stage process, **165**, 237
structural characterization of thin films of cadmium telluride, **164**, 85
study of crystallization in amorphous tellurium films using resistivity measurements, **156**, 345
study of thermodynamic processes in the hot wall reactor for the growth of high quality CdTe on GaAs, **163**, 241
transport properties of tellurium films prepared by hot wall epitaxy, **162**, 1
uniform composition Te–Se film preparation from alloy sources, **157**, 307
Temperature
influence of temperature on the growth of TiN films by plasma-assisted chemical vapour deposition, **161**, L87
structure and temperature dependence of fatty acid Langmuir–Blodgett films studied by neutron and X-ray scattering, **159**, 253
Temperature coefficient of resistivity
electrical conductance and temperature coefficient of resistivity of double-layer films, **158**, 13
Terbium
spray deposition of $TbCl_3$-doped In_2O_3 photoluminescent films, **165**, 249
Terphenyl
control of structure in Langmuir–Blodgett films of terphenyl liquid crystal compounds, **159**, 345
Textures
aligned textures in multilayers of cadmium arachidate as seen by electron microscopy, **159**, 405
formation of textures in vacuum-condensed tin on glass, **161**, 213
Theoretical studies
a novel matrix approach for solving the multiple quantum well problem, **163**, 461
the polarizability of truncated spheres and oblate spheroids on a substrate: comparison with experimental results, **164**, 57
theoretical description of gas–film interaction on SnO_x, **163**, 189
theory of light reflection from a substrate sparsely seeded with spheres: comparison with an ellipsometric experiment, **164**, 63
Thermal properties
effects of substrate thermal expansion coefficient on the physical and electrical properties of thick film resistors, **162**, 7
the role of thermal conductivity in the pulsed

laser damage sensitivity of optical thin films, **163**, 203
thermal diffusivity measurement of micron-thick semiconductor films by mirage detection, **155**, 165
a thermal spike analysis of low energy ion-activated surface processes, **165**, 359
thermostability and photodesorption of Langmuir–Blodgett films, **159**, 387
Thermally stimulated currents
thermally stimulated currents in thin amorphous GeS films, **155**, L5
Thermochromic films
thermochromic Langmuir–Blodgett films of a novel amphiphilic azo dye with homogeneous chromophore orientation, **160**, 407
Thermodynamic processes
study of thermodynamic processes in the hot wall reactor for the growth of high quality CdTe on GaAs, **163**, 241
Thermoelectric properties
thermoelectric effects in thin films and wires, **156**, 191
thermoelectric power of indium tin oxide films, **157**, 7
thermoelectric properties of $Bi_{1-x}Sb_x$ films with $0 < x < 0.3$, **155**, 197
Thickness
determination of the thickness of thin titanium dioxide films from photoacoustic interference signals, **155**, 295
determination of thickness uniformity and magnetic bubble parameters for garnet thin films by Faraday rotation, **164**, 191
the effects of thickness on the electrical conduction of thin poly(1-trimethylsylil-1-propyne) films, **165**, 337
film thickness and composition determination for binary alloys using backscattered electrons, **165**, 217
simultaneous measurement of coating thickness and deposition stress during thermal spraying, **164**, 157
Thin films
quantitative X-ray fluorescence analysis of single-layer and multilayer thin films, **157**, 283
thermoelectric effects in thin films and wires, **156**, 191
Thiophenes
Langmuir–Blodgett films of oligo- and polythiophenes with well-defined structure, **160**, 87
III–V compounds
plasma deposition of amorphous hydrogenated carbon films on III–V semiconductors, **157**, 97
Thulium
electrical properties of thulium oxide thin films, **164**, 175
Time to failure
a comparison of the median time to failure with temperature-ramp resistance analysis to characterize electromigration to determine electromigration kinetic parameters, **155**, 209
Tin
comparison of the electrical properties of polyimide films containing surface metal oxide: cobalt oxide *vs.* tin oxide, **158**, 189
experimental electronic density of states of tin selenide measured on thin films, **164**, 69
formation of texture in vacuum-condensed tin on glass, **161**, 213
growth of $Pb_{0.82}Sn_{0.18}Te$ by molecular beam epitaxy, **161**, 171
indium tin oxide films from metal–organic precursors, **161**, 273
interfacial reactions in bimetallic Ag–Sn thin film couples, **155**, 243
IR spectroscopy of a-$Si_{1-x}Sn_x$:H films, **164**, 243
mechanics of film formation during the spray pyrolysis of tin oxide, **165**, 265
photoconductivity studies of indium/epindolidione/indium tin oxide sandwich cells, **158**, 175
preparation and characterization of some tin oxide films, **158**, 69
preparation of indium tin oxide films by vacuum evaporation, **162**, 305
structural properties of SnO_2:F films deposited by spray pyrolysis technique, **164**, 261
theoretical description of gas–film interaction on SnO_x, **163**, 189
thermoelectric power of indium tin oxide films, **157**, 7
thin films prepared from tetramethyltin, **155**, 65
variations in structural and electrical properties of magnetron-sputtered indium tin oxide films with deposition parameters, **162**, 119
X-ray line profile analysis studies on SnSe thin films deposited at different substrate temperatures, **165**, 257
Titanium
absorption and laser damage resistance of TiO_2 thin films deposited on laser-irradiated substrates, **162**, 217
characterization of $Ti_{1-x}B_x$ films deposited by a co-sputtering method, **164**, 95
dependence of microstructure of TiN coatings on their thickness, **158**, 225

the deposition and film properties of reactively sputtered titanium nitride, **161**, 289
deposition of TiB_2 films by a co-sputtering method, **156**, 287
determination of the thickness of thin titanium dioxide films from photoacoustic interference signals, **155**, 295
effect of deposition parameters on the deposition characteristics of chemically vapour-deposited $PbTiO_3$, **165**, 291
the effectiveness of chromium and TiW as diffusion barriers for AuZn/Au contacts in InP junction field effect transistors, **162**, 161
the effect of stoichiometry on sputtering, deuterium retention and surface damage in titanium carbide films, **156**, 231
electrical properties of Ti–Si–N thin cermet films deposited in a triode sputtering system with a hot cathode, **162**, 111
failure mechanisms of TiN thin film diffusion barriers, **164**, 417
high temperature stability of plasma-enhanced chemically vapour-deposited titanium silicide due to two-step rapid thermal annealing, **157**, 135
the influence of the physicochemical characteristics of the substrate surface on the deposited TiN film properties, **163**, 309
influence of temperature on the growth of TiN films by plasma-assisted chemical vapour deposition, **161**, L87
the metastable C49 structure in sputtered $TiSi_2$ thin films, **158**, 255
nitrogen migration and nitride formation during low temperature reactive annealing of titanium, **156**, 117
plasma-assisted chemical vapour deposition of TiN and TiC on steel: properties of coatings, **165**, 139
positron lifetime study of vacancy defects in non-stoichiometric TiN_x and TiC_x films, **163**, 49
structure of TiN coatings deposited at relatively high rates and low temperatures by magnetron sputtering, **156**, 53
the temperature dependence of superlattice spots in electron diffraction patterns of thin layers of Ag_xTiS_2 formed by electrointercalation, **164**, 81
TiC and TiN coatings formed on Si_3N_4–TiC composite ceramics by chemical vapour deposition, **165**, 149
treatment of WTi contacts on silicon with low energy argon ions, **164**, 493
variations in the reflectance of TiN, ZrN and HfN, **157**, 255
voltametric behaviour of anodic titanium oxide films close to the hydrogen evolution reaction, **162**, 353
X-ray diffraction study of phase composition and amorphization in magnetron-sputter-deposited thin films of stainless steel–titanium, **161**, 223

TMTTF
highly conducting Langmuir–Blodgett films of the TMTTF–CnTCNQ system, **160**, 61

Tracer studies
modelling of ^{18}O tracer studies of the oxygen redistribution during formation of SiO_2 layers by high dose implantation, **161**, 333

Transfer
two-step transfer of conducting Langmuir films from a glycerol subphase, **159**, 207
using the transfer of a Langmuir monolayer as a probe of wetting, **159**, 215

Transition metals
ellipsometric comparisons of rare earth–transition metal alloy films in connection with magneto-optical recording, **162**, 89
fabrication of transition metal nitride films using a shock wave plasma, **163**, 233

Transport properties
size-dependent quantum and classical transport in metallic thin films, **164**, 141
transport properties of tellurium films prepared by hot wall epitaxy, **162**, 1

Tribological properties
microstructure and tribological property correlations of ion-implanted bearing steels, **163**, 365

Tungsten
characterization of cosputtered tungsten carbide thin films, **158**, 37
characterization of ultrathin platinum overlayers deposited on a W(110) surface, **163**, 393
cosputtered $W_{75}C_{25}$ thin film diffusion barriers, **158**, 45
effect of excess silicon on behaviour of LPCVD WSi_x films on silicon, **163**, 267
the effectiveness of chromium and TiW as diffusion barriers for AuZn/Au contacts in InP junction field effect transistors, **162**, 161
electrochromic characteristics of La_2O_3–WO_3 thin films, **161**, 67
electrochromism in anodic WO_3 films
I: preparation and physicochemical properties of films in the virgin and coloured state, **161**, 35

electrochromism in anodic WO_3 films
II: optical and electrochromic properties of coloured "distorted" hexagonal films, **161**, 47
electrochromism in polycrystalline WO_3 thin films prepared by chemical vapour deposition at high temperature, **164**, 369
mechanical properties of r.f. magnetron-sputtered W–C films on stainless steel, **161**, 107
preparation of W–C thin films by reactive r.f. sputtering and Auger electron spectroscopy surface characterization, **161**, L91
properties of selective low pressure chemically vapour-deposited tungsten films produced by hydrogen reduction in a cold wall system, **164**, 501
structure, optical and electro-optical properties of polycrystalline WO_3 and MoO_3 thin films prepared by chemical vapour deposition, **164**, 333
structure and properties of W/C and Ni/C multilayer films, **164**, 405
thermodynamic investigation of selective tungsten chemical vapour deposition: influence of growth conditions and gas additives on the selectivity in the fluoride process, **158**, 107
treatment of WTi contacts on silicon with low energy argon ions, **164**, 493
II–VI compounds
physical properties of II–VI binary and multicomponent compound films and heterostructures fabricated by chemical vapour deposition, **164**, 301

U

Ultrathin films
spectroscopic ellipsometry of ultrathin films: from UV to IR, **163**, 157
UV light
UV-light-assisted vacuum deposition of spiropyran compounds, **162**, 343

V

Valinomycin
the deposition and characterization of multilayers of the ionophore valinomycin, **160**, 483
Vanadium
electromechanical properties of thin VO_2 films on polyimide substrates, **158**, L49
vanadium dioxide films grown from vanadium tetraisopropoxide by the sol–gel process, **165**, 317
Vibrations
X-ray studies of thermal vibrations of thin lead films, **164**, 91
Viscoelasticity
viscoelasticity of pentadecanoic acid monolayers, **159**, 169

W

van der Waals theory
orientational effects in adsorption
IV: application of the van der Waals theory to the description of submonolayer films of linear molecules on solid surfaces, **161**, 367
Water
continuous recording of the evaporation rate of water through monolayers, **159**, 53
photoacoustic detection of water permeation through ultrathin films, **160**, 501
Wetting
using the transfer of a Langmuir monolayer as a probe of wetting, **159**, 215
Windows
reactively sputtered ZnO:Al films for energy-efficient windows, **164**, 381
Wires
thermoelectric effects in thin films and wires, **156**, 191
Work function
a work function study of the initial epitaxial growth and stability of thin copper layers on Pd(111), **163**, 447

X

X-ray fluorescence
quantitative X-ray fluorescence analysis of boron in thin films of borophosphosilicate glasses, **157**, 325
quantitative X-ray fluorescence analysis of single-layer and multilayer thin films, **157**, 283
X-ray photoelectron spectroscopy
application of X-ray photoelectron spectroscopy and Fourier transform IR reflection absorption spectroscopy to studies of the composition of Langmuir–Blodgett films, **159**, 267
determination of the depth–concentration profile of the transition layer in $Ga_{1-x}Al_x/GaAs$ heterostructures by X-ray photoelectron spectroscopy, **155**, 285
X-ray photoelectron spectroscopy of O 1s and Si 2p lines in films of SiO_x formed by electron beam evaporation, **157**, 351

X-ray studies
a comparative study of silver photodoping in chalcogenide films by means of extended X-ray absorption fine structure and kinetics measurements, **164**, 467
Langmuir–Blodgett monolayers studied by surface-sensitive X-ray absorption fine structure, **159**, 435
medium angle X-ray scattering of Langmuir–Blodgett films of cadmium salts of fatty acids, **159**, 421
near-edge X-ray absorption fine structure studies of oriented molecular chains in polyethylene and Langmuir–Blodgett monolayers on Si(111), **159**, 275
structure and temperature dependence of fatty acid Langmuir–Blodgett films studied by neutron and X-ray scattering, **159**, 253
synchroton X-ray study of the structure of a Langmuir monolayer and the attached solute molecular layer, **159**, 29
X-ray characterization of epitaxially grown dilute magnetic semiconductors $Zn_{1-x}Fe_xSe$ ($0 < x < 0.22$), **164**, 111
X-ray diffraction of Langmuir–Blodgett films: establishing a new method for the calculation of electron density distributions from a single set of intensity data, **159**, 451
X-ray diffraction and optical studies of Langmuir–Blodgett films formed from azobenzene derivatives, **155**, 343
X-ray diffraction study of phase composition and amorphization in magnetron-sputter-deposited thin films of stainless steel–titanium, **161**, 223
X-ray emission spectroscopy study of substoichiometric $Bi_{2-x}Sb_xS_3$ system, **164**, 75
X-ray line profile analysis studies of SnSe thin films deposited at different substrate temperatures, **165**, 257
X-ray and neutron reflectivity from spread monolayers, **159**, 43
an X-ray scattering study of lipid monolayers at the air–water interface and on solid supports, **159**, 17
X-ray studies of thermal vibrations of thin lead films, **164**, 91

Y

Yttrium
the optical properties of YF_3 films, **155**, 17
screen-printed superconducting films of Y–Ba–Cu–O, **158**, L45
structural and electrical properties of screen-printed thick films of $YBa_2Cu_3O_{7-x}$ superconductors, **164**, 115
superconductivity behaviour in screen-printed $YBa_2Cu_3O_7$ films, **164**, 119

Z

Zinc
conducting luminescent ZnS films formed by plasma-assisted metal–organic chemical vapour deposition, **162**, 263
effect of applied external magnetic field on the relationship between the arrangement of the substrate and the resistivity of aluminium-doped ZnO thin films prepared by r.f. magnetron sputtering, **164**, 275
fabrication and crystallophysical properties of $(ZnSe)_x(CdTe)_{1-x}$ ($x = 0$–1) multicomponent system films, **162**, 257
kinetic properties and energy transfer in the electroluminescence of thin film cells based on ZnS:Mn, **161**, 59
low-voltage-driven a.c. thin film electroluminescent cell containing a ZnS:Mn film deposited by molecular beam epitaxy, **162**, 73
low-voltage-driven ZnS:Mn thin film electroluminescent devices using insulating dielectric ceramic sheets, **164**, 363
photovoltaic properties of ZnO/p-CdTe thin film heterojunctions, **164**, 295
preparation of ZnTe thin films using a simple two-stage process, **165**, 237
reactively sputtered ZnO:Al films for energy-efficient windows, **164**, 381
study of sputtered ZnO–Pd thin films as solid state H_2 and NH_3 gas sensors, **157**, 169
superlattice $ZnS_xSe_{1-x}/ZnS_ySe_{1-y}$ on (100) GaAs obtained by a photoassistant metal-organic chemical vapour deposition method, **163**, 475
X-ray characterization of epitaxially grown dilute magnetic semiconductors $Zn_{1-x}Fe_xSe$ ($0 < x < 0.22$), **164**, 111
Zirconium
alkoxide-derived amorphous ZrO_2 coatings, **163**, 273
a comparison between amorphous Ni–Zr alloys formed by solid state reaction and by co-deposition, **164**, 199
a high resolution transmission electron microscopy study of ZrO_2–CaO films, **162**, 235
variations in the reflectance of TiN, ZrN and HfN, **157**, 255